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SUMMARY
OF
THE PRINCIPAL MEASURES
OF
THE VICEROYALTY
OF
THE MARQUESS OF LANSDOWNE
IN THE
DEPARTMENT OF REVENUE AND AGRICULTURE,
DECEMBER 1888 TO JANUARY 1894.



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SUMMARY
OF THE
PRINCIPAL MEASURES
OF
THE VICEROYALTY
OF
THE MARQUESS OF LANSDOWNE.

CHAPTER I.

PREFATORY.

This Note is arranged so as to follow in sequence and order of division the similar narratives prepared for the periods of Lord Ripon's and Lord Dufferin's administration. Each chapter deals with a separate subject and briefly explains in each case the action taken by Government previous to Lord Lansdowne's arrival in December 1888, and then describes more fully the measures adopted or initiated during Lord Lansdowne's term of administration. *Scope of the Note.*

2. The following are the Honourable Members who have been in charge of the Department of Revenue and Agriculture during Lord Lansdowne's tenure of office :— *Officers in charge.*

Sir P. P. Hutchins, K.C.S.I., to 29th November 1893.

Sir A. P. MacDonnell, K.C.S.I., from 30th November 1893.

3. The following have been Secretaries in the Department :— *Secretaries.*

Sir Edward C. Buck, Kt., C.S.I.

Mr. W. C. Bennett (officiated from 11th March to 1st October 1890).

Mr. J. W. P. Muir-Mackenzie (officiated from 18th October 1889 to 13th November 1889, 20th March 1890 to 31st March 1890, 22nd October 1891 to 25th November 1891 and 7th August 1892 to 31st December 1892).

4. The following have been Under-Secretaries :— *Under-Secretaries.*

Mr. H. W. C. Carnduff, Officiated to 24th December 1888.

Mr. W. R. Lawrence, C.I.E., 13th April 1888 to 5th April 1889.

Mr. J. W. P. Muir-Mackenzie, from 6th April 1889 to 2nd April 1893.

Mr. P. C. Lyon (officiated from 25th April 1891 to 21st July 1891).

Mr. E. D. MacLagan, from 3rd April 1893 (officiated from 5th August 1892 to 2nd January 1893).

CHAPTER II.

THE ORGANIZATION OF THE AGRICULTURAL DEPARTMENT.

*Its origin and
objects.*

5. The organization of the Department is fully described in the notes on the administrations of Lord Ripon and Lord Dufferin. Briefly, an Imperial Department was created in 1881 in pursuance of the recommendations of the Famine Commissioners, which, on the one hand, was to organize and direct Departments of Agriculture in the Provinces, and on the other hand, to control the administration of land revenue. Through the Provincial Departments the elaborate recommendations of the Famine Commissioners were to be carried out. The Imperial Department was thus at one and the same time constituted an organizing and directing Department, and a Secretariat.

*Its work and
development.*

6. The main functions of the new office were in the Secretary of State's Despatch of June 1881 described as agricultural enquiry, agricultural improvement, and famine relief; to which duties must be added the administration of the land revenue system. The official placed in charge of the new Department in 1881 was Sir E. Buck, the present Secretary, who for five years had, in the North-Western Provinces, directed the only Agricultural Department previously existing in India. It had there been discovered that the only sound foundation for a scheme of agricultural enquiry and for land revenue administration was the development of the indigenous system of maintaining maps and records in each village. The same principle had to be extended to all India. This has entailed the education and control through the Provincial authorities of some hundreds of thousands of village accountants, and the progress made in this direction is described in the chapters on assessment and on survey. The work received a strong impetus under Lord Lansdowne's administration in the extension of the system to Madras, Assam, some parts of Bombay, and the Native State of Gwalior. In other Provinces it had already been established when Lord Lansdowne arrived and it is now approaching completion.

*Further
responsibilities
of the Department.*

7. But the attention of Lord Lansdowne's Government had still to be directed to the fulfilment of the other responsibilities placed upon the Department by the Secretary of State in his Despatch of June 1881. These were—

Firstly.—The perfecting of the system of famine relief which had been inaugurated under Lord Ripon or Lord Dufferin.

Secondly.—The utilization of facts and figures derived from the village land records and from other sources in such a way as (to use the Secretary of State's words) "to render available the statistics of vital, agricultural, and economic facts for every part of India, in order that Government and its officers may always be in possession of an adequate knowledge of the actual condition of the country, its population, and its resources."

Thirdly.—The institution of measures leading to agricultural improvement—a subject which had purposely been deferred

by Lord Ripon and Lord Dufferin until the village organization throughout the country had been completed.

Fourthly.—The extension of reforms in land revenue administration through the agency of village establishments.

8. Under the *first* of these heads, *viz.*, the perfecting of the system *i. Famine Relief* of famine relief, a Resolution No. 35 F., dated 24th August 1893, was recently published in which the various and important instructions issued from time to time by Lord Lansdowne's Government were summarised and which practically require the recasting of all the Provincial Famine Codes drawn up under Lord Ripon's administration. A more detailed account of the reforms and improvements introduced will be found in the Chapter on Famine Relief.

9. Under the *second* head, *viz.*, the utilization of facts and figures *ii. Economic Statistics.* now rapidly accumulating, great strides have been made under Lord Lansdowne's Government. In every administrative circle of about 200 square miles throughout the greater part of India ledger books have been established, from which every official in the country can quickly ascertain the progress or decline of the agricultural tract concerned, as well as the condition of the people who reside therein; a complete and detailed compilation of all facts and statistics connected with the economic products of the country has, in the last year of Lord Lansdowne's Viceroyalty, been published in a valuable work of 8 volumes; two series of official bulletins connected with agricultural and economic products have within the last two years been founded, in which all important facts and statistics derived from the investigations of the current year are month by month published; the statistical tables required by the Secretary of State have been improved; while measures have been taken to publish in useful form the information supplied by the Departments of Forests, Survey, Inland trade, Geology, Meteorology, Veterinary science, Botany, Agricultural chemistry, and Field entomology, all of which are under the administrative control of the Revenue Department. The subject is more fully dealt with in the Chapter on Statistics.

10. It has, however, been found that the office of the Department *Need for a Statistical Bureau.* is far too weak to deal comprehensively with the statistical information now pouring in upon it. The necessity of a properly organized Statistical Bureau has been strongly urged by the Revenue Department and admitted by the Department of Finance. It has been confirmed by the statistical requisitions made by the Secretary of State for compilations, who has indeed in a despatch now before Lord Lansdowne suggested that a special officer should be placed on duty for several months decennially in order to deal in a comprehensive manner with decennial statements; but this would be a very imperfect and unsatisfactory measure. The despatch demands the immediate appointment of such an officer for 8 or 10 months. In 1891 the Department of Revenue and Agriculture represented the necessity of strengthening the staff, if the responsibilities placed upon it by the Secretary of State in 1881 were to be fulfilled. No material steps were taken in this direction. In the autumn of 1893 a strong despatch was sent

home, urging that for two years at least a third officer should be employed, but in a despatch just received from the Secretary of State it has been decided that for financial reasons this requisition cannot be accepted. It appears therefore to be more than ever imperative to resume the proposal for a Statistical Bureau, which can be effected at less cost for the ensuing year than can probably be entailed by the appointment of a special officer. The question rests here, as the subject cannot be considered until the Secretary of State's despatch on the general proposal has been officially dealt with.

*iii. Agricultural
improvement.*

11. Under the *third* head an important commencement has been made during Lord Lansdowne's Viceroyalty. The policy urged since 1881 has been to defer any attempt to introduce broadcast into the country supposed or presumed agricultural improvements, at any rate until the education of the people has advanced to a much higher level. Hitherto education has taken an exclusively literary direction. No practical instruction has been given in the rural schools, and those of the cultivators' children who have been taught have either left their fields for professions or clerkships, or are quite unfitted to interest themselves in agricultural improvement. The Secretary of State has now been told in Lord Lansdowne's despatches that while the Educational Department would be urged to give rural education a more practical turn, the Agricultural Departments would be required to collect agricultural information and to set on foot such experiments and enquiries through Government farms and the agency of agricultural experts as might lead to the determination of what could be recommended as improvements when some years hence the agricultural population would be better fitted to receive them. Until then no attempts involving material expenditure would be made to force alleged improvements on the people. The Secretary of State has agreed to this policy.

*Dr. Voelcker's
mission.*

12. Before agreeing however he had determined to send out Dr. Voelcker, Secretary of the Royal Agricultural Society, to report how far the views of the Government of India were sound. Dr. Voelcker was in the country from December 1889 to January 1891, and in the autumn of 1893 sent out an interesting and able report in which he fully confirmed the policy supported by Lord Lansdowne. In the meantime the Secretary of State had on Dr. Voelcker's advice sent out two Agricultural Chemists, one of whom is required to tour through the provinces and consult with the officers of the Agricultural Departments as to what the scheme of experiments in each province should be. The other is in charge of a laboratory for the analysis of the agricultural soils and waters. In October 1893 a conference was summoned under Lord Lansdowne's directions of Directors of Agricultural Departments in all provinces, for the purpose of deciding the nature of the instructions which should be issued on the numerous recommendations contained in Dr. Voelcker's report, and a series of resolutions will shortly be submitted to His Excellency the Viceroy, which will embody the views and advice of the agricultural officers and will be circulated to Local Governments for consideration and action.

*iv. Land Revenue
Reform.*

13. Under the *fourth* head, which deals with reforms in land revenue establishments, a full account of the measures taken and the

progress made during the five years under review will be found in the Chapters on land assessment and on survey.

The principal Despatches and Resolutions bearing on the subject of this chapter are :—

- { Despatch No. 3, dated 5th February 1889, to Secretary of State.
- { Resolution No. 345—55C. I., dated 25th May 1890, with enclosures.

CHAPTER III.

FAMINE RELIEF.

*The Famine
Commission of
1878-80.*

14. The great famine which desolated India in 1876-78 led to the appointment in 1878, under the orders of Parliament, of a Commission to investigate the causes of famine and to suggest measures of protection.

Draft Codes issued.

15. The Commission submitted their report in 1880. In pursuance of their recommendation a draft Code for the guidance of all officials in matters of famine administration was issued by each Local Government on a plan laid down by the Imperial Government, and these Codes were in force when Lord Lansdowne assumed the office of Viceroy.

Recent scarcities.

16. From the time of the great famine no important failure of crops had occurred, and no further experience had been gained in the management and relief of famine stricken tracts. But in 1888, the year in which Lord Lansdowne arrived, there was a serious deficiency in the monsoon rains in Ganjam, the northernmost district of the Madras Presidency, and in the adjoining districts and Native States of Orissa. Again, in 1889, local distress was caused by floods in Bengal and by failure of rain in the hill districts of the North-Western Provinces. In 1891 insufficient rainfall in Madras, in Southern Bombay, and in the Native States of Mysore, Hyderabad, and Rajputana led to a general scarcity which prevailed for the greater part of a year and a half over much of the affected area. Distress was really serious and widespread. In Ajmere it was almost alarming. The central or 'rainless' belt of Burma suffered at the same time, and in 1892 distress extended to Western Bengal.

Ganjam and Oriss.

17. The treatment of the Ganjam famine of 1888-89 and the Orissa famine of 1889 was found, soon after Lord Lansdowne's arrival, to have been met with insufficient energy by the local authorities. Subsequently Lord Connemara first deputed a member of the Board of Revenue to Ganjam, and then visited the district himself for the purpose of urging the local authorities to more energetic action. Sir John Edgar, Chief Secretary to the Bengal Government, was at the same time deputed to Orissa; relief works were started; large sums were advanced to the Native Chiefs; before the end of August 1889, 120,000 persons were admitted to famine works or were gratuitously relieved; and by November 1889 distress had completely subsided.

Scarcity of 1891-92.

18. The scarcity of 1891-92, though not to be compared either in extent or intensity with the famine of 1876-78, was sufficiently severe and widespread to cause much anxiety. Taking for each Province the average daily number of the month in which distress was most severe, the maximum number of persons on relief works and in receipt of gratuitous relief was 267,000.*

*Madras	.	.	.	80,000
Bombay	.	.	.	17,000
Bengal	.	.	.	57,000
Ajmere	.	.	.	38,000
Burma	.	.	.	25,000
Mysore and Hyderabad	.	.	.	35,000
Rajputana	.	.	.	20,000
				<hr/>
				267,000

Measures of relief.

19. Throughout the period the measures taken by the Local Governments were, as a rule, prompt and careful. Loans for agricultural improvements were freely given in Madras and Bombay, and were found of great value. In these two Presidencies the Governors, Lord Wenlock and Lord Harris, zealously and personally directed the measures instituted for relief. In Bengal the experience of Sir Charles Elliott had

useful effect. In all Provinces the officials met the difficulties with promptness and energy.

20. The Provincial Famine Codes were put to a severe test, and on the whole worked well. But the experience gained led to the discovery of various and, in some cases, of important defects in them. Lord Lansdowne's Government determined therefore to undertake, in consultation with Local Governments, a complete revision of the Famine Codes which had been based on the instructions of 1883. *Revision of the Famine Codes.*

21. This has been done; in the autumn of 1893 full and final instructions on all important points were issued under Lord Lansdowne's directions by the Revenue Department, in accordance with which a revised Code is now being prepared in each Province for the approval of the Government of India. *Final instructions issued.*

22. Perhaps the most important amendment required by the revised instructions is that the restriction of the wage-rate on relief works within the limits intended by the Famine Commissioners should be made obligatory in order to preclude the risk of extravagant expenditure being caused by the undue attraction of excessive numbers to relief works. Absence of strictness in this direction had, it was found, led in more than one Province to the upkeep of relief works when they were no longer wanted. Another amendment of importance consists in the prescription of a famine wage calculated in grain instead of in cash. Various other improvements have been introduced which are explained in detail in the Resolution to which reference has been made. *Limit of the wage-rate.*

23. In 1893 a measure of practical utility was taken in the completion of a Weather and Famine Telegraphic Code. It had been found that during all periods of scarcity it became necessary to keep the Home Government continuously informed of the progress of events. Reports indeed were frequently called for either by the House of Commons or the Secretary of State. Often the telegrams which had to be sent were lengthy and expensive. Moreover, many details had to be withheld which with a fuller Telegraphic Code could easily have been communicated. These difficulties will be met in future by the revised Code which was despatched to the Secretary of State shortly before Lord Lansdowne's departure. *Weather and Famine Telegraphic Code.*

24. In November 1893 a review of all the measures which had been taken since 1881 in pursuance of the recommendations of the Famine Commission was submitted to the Secretary of State. This was done in compliance with a question asked in the House of Commons during the preceding session. The report deals with every subject taken up by the Famine Commissioners, and affords satisfactory proof that during Lord Lansdowne's Viceroyalty the programme imposed on the Government of India by the Famine Commissioners was, so far as it had been sanctioned by the Secretary of State, carried out by the Department of Revenue and Agriculture. *Review of measures taken on the recommendations of the Famine Commission.*

The principal Despatches, Resolutions, etc., bearing on the subject of this chapter are :—

- { Circular No. 63—77, dated 19th December 1889.
- { " " 25—1, dated 10th September 1891.
- { Resolution No. 35—33, dated 24th August 1893.
- { Despatch No. 70, dated 30th August 1892, to Secretary of State.
- { Despatch No. 2, dated 3rd January 1894, to Secretary of State.

CHAPTER IV.

LAND REVENUE ASSESSMENT.

Systems of assessment.

25. In 1891 it became necessary for Lord Lansdowne's Government to report on the assessments of land revenue then being imposed upon the landholders of the Central Provinces, and a despatch was written with the object of providing the Secretary of State with such an explanation of the system of assessment in India as could, if occasion should require, be placed before the House of Parliament. As it contains a brief but clear exposition of the relation of the State to the land as accepted by Lord Lansdowne, and as it explains, though dealing primarily with the Central Provinces, the principles governing the assessment of land revenue in many other parts of India, this chapter may be suitably opened with the following extract from the despatch.

"4. In India the right of the State to a specified share of the produce of the land is established by long-continued custom and the historical precedents of many centuries. In asserting this right the State acts as the representative of the whole tax-paying community of the Empire, whose interests it is its bounden duty to guard and to protect from encroachment. In Provinces in which there exist between the State and the ryots classes of middlemen holding interests in the land, upon whom under British Rule the title of "landlords" has usually been, whether rightly or wrongly, conferred without discrimination, the produce is divided between the ryots, the landlords, and the State. It is a question, which it is too late to consider now, whether the great majority of middlemen in the Central Provinces were really entitled to the position of landlords which was accorded to them under British Settlement. An examination of the history of this Province leads to the conclusion that as a rule they were either little more than leading ryots, *primi inter pares*, with no real proprietary rights over their brethren; or mere contractors for the collection and payment of the State revenue. Nevertheless they have been in previous settlements, and still are, dealt with as proprietary landlords. The principle on which throughout Northern India, including the Central Provinces, the share of the produce paid by the ryot in the form of rent had until recent years been divided, was that two-thirds of the net receipts from an estate were paid into the State exchequer, and one-third left with the landlord. This in itself was a division more liberal to the landlord than that which prevailed under native rulers who not unfrequently exacted as much as 80 per cent. But when not long after the mutiny the Government of the North-West Provinces adopted a still more lenient rate of assessment, and restricted the State demand as a rule to one-half of the assets, the practice was followed in other Provinces in which landlords have been established, and in lieu of the two-thirds of the assets which were claimed at the last settlement a share of from 50 to 60 per cent. has now, in the Central Provinces, been adopted as the standard. This cannot be regarded as otherwise than a very material concession.

"5. We turn now to the still more important question of the share of the produce which the landlords themselves are entitled, on behalf of themselves and the State, to demand from the ryots. In Provinces where there are no interests intervening between the ryot and the State the enhancement of rent claimed at periodical revisions of settlement has, as Your Lordship is aware, been based primarily on the quality of the soil and natural advantages of each locality, and, secondly, upon general considerations, such as an increase of prices and improvement of communications. In other Provinces, where the landlord has been established, the general rule has been to leave the enhancement of the rent, subject to certain restrictions in the case of the ryots with rights of occupancy, entirely to the landlords; but in the Central Provinces it was, when the present rent law of the Province was framed, determined that the rents of the ryot should be fixed by the assessing officers at the time of settlement for the whole period for which the

district might be reassessed. This provision of the law required the Settlement Officers to be guided by the principles which have been adopted for the assessment of ryotwari Provinces. The holding of each ryot had to be separately examined, and valued and assessed at a fair rent. The careful and laborious system under which this difficult task has been accomplished is explained in the Settlement Code and other papers appended to this despatch. It is unnecessary to enter into further details here. It is sufficient to state that the share of the produce which is now demanded from the ryot is far less than that generally taken by either the State or the landlord in other parts of India. For instance, as pointed out in paragraph 9 of the appended memorandum by the Chief Commissioner, dated the 4th September 1891, the share is in the Bilaspur district something like 4 per cent., whereas the share ordinarily taken by landlords in the Upper Provinces is in the case of tenants with rights of occupancy not less than 15 per cent., and in the case of other tenants often double or more than double that amount. The explanation is not difficult. The thirty years for which the settlements now terminating had been made were marked by an unprecedentedly rapid rise in prices, due mainly to improvement in communications by land and sea. A concomitant result was an enormous extension of the cultivated area. At the commencement of the period, the rich crops raised by the cultivators in a region in which the rain rarely or never fails, on soils of exceptional fertility, were often unsaleable on account of their distance from the market. It was reported when the project for the recently constructed line between Calcutta and Bombay, which passes through the heart of the Central Provinces, was submitted, that wheat and other grains were left rotting on the ground for want of purchasers. The consequence has been that, notwithstanding the vastly enhanced value of the produce on a rapidly expanding area of tillage, or it might be more correct to say on account of the rapid increase in both the quantity and value of produce, the officers of the State have been unable to assess upon the ryots anything like the rents which in more advanced parts of India would be considered to be moderate and fair. They dared not subject the agricultural classes to so sudden an enhancement of the demand. In other words, they have been compelled to relinquish a material portion of that share of the produce which would elsewhere have been taken as the legitimate portion for division between the landlords and the State.

“6. It will be gathered from the observations in the two preceding paragraphs that in the assessment of the Central Provinces the State has made a double concession, firstly, in the reduction of the percentage of assessment on landlords from two-thirds to little more than one-half of their assets, and secondly, in the restriction, to a very material extent, of the enhancement of the ryots' rents—a restriction which also limits the assessment leviable on the landlords themselves.

“7. Under the circumstances which have been described it was impossible that the enhancements, whether of rent or of revenue, should be otherwise than intrinsically large, although falling far short of the assessments which, on principle, could have been legitimately imposed. The agricultural wealth of both ryots and landlords has been during the last 30 years so enormously increased, that even with the most liberal concessions the share of the State, as representing the general community, could not fail to be material. This result has been mainly due, as we have indicated, to the length of the period for which the last settlements were made and to the rapid progress of communications during their currency. The introduction of a 30-years' term was an innovation on the older system of short settlements, due in great measure to the desire of Government to avoid the frequent recurrence of expensive and harassing proceedings, and was effected, perhaps unfortunately, at a time when the Provinces were just entering upon a career of unprecedented progress, which gave to the produce of a rapidly increasing area of cultivation an enhanced value entirely independent of the exertions and industry of the agricultural population. In other words, the landlords and ryots have both reaped the benefit of an enormous unearned increment, the greater part of which has still been left in their hands. It is in order to avoid a repetition of this contingency that the new settlements have been made for more limited terms, especially as we have every reason to believe that the stimulus given to cultivation by the new railway will tend to create a fresh era of rapid agricultural progress.

" 8. On the other hand, material advantages have been secured to the landlords. They have a guarantee for the future against most of the uncertainty which has characterized all previous assessments. They have been made aware that, whatever addition may be made to the revenue claimed by the State at both this and future settlements, an almost equal addition will be made to their own income, so far as it is derived from land in the occupation of cultivators, while in the case of the untitled area they will be permitted to enjoy the whole rental of so much as may be brought under cultivation during each current term of settlement.

" 9. At the same time the measures which have been taken to establish accurate village field-maps and records-of-rights and to secure their maintenance up to date by the village officers and their supervisors, will not only obviate in future the harassment and disturbance hitherto involved by revisions of survey and reclassification of soils, thus removing the main obstacle to the formerly prevailing system of shorter settlements, but will also considerably assist the landlords in leasing lands, and in settling their accounts with the ryots. * * * *

" 11. In view of the fact that it is publicly announced in vernacular papers that the subject of the land revenue assessments in the Central Provinces is likely to be discussed at a meeting of the National Congress at Nagpur at the close of the year, we take the opportunity to append to this despatch a communication received in 1890 from Mr. A. O. Hume, the late President of the Congress, which contains a very fair exposition of the right of the State to a recognized share of the produce of the land.

" Clearly," Mr. Hume writes—

" what we have yet to work out is some such system of settlement as shall secure to the people at large or in other words to the Government (which is, or ought to be, only the trustees for that people) the largest possible share of the unearned increment, and to the holders and cultivators of the land the largest possible share of the earned increment, whereas our permanent settlement has given to a class the whole of that unearned increment which should have been reserved for the nation at large, while our temporary settlements seize for the general public a very large portion of the earned increment which really is (and ought to be so accepted by law) the private property of the individuals by whose labour and capital it is evolved."

It may be safely asserted that when tested by the principles which are put forward by Mr. Hume, and which are not otherwise than in accordance with the present policy of our land revenue administration, the assessments in the Central Provinces err, if at all, in the direction of leniency, and that both landlords and ryots have been allowed to retain a far larger share of the unearned increment than would, if these principles were rigorously applied, be their legitimate due. It is doubtful whether there has been any increment which could be justly designated as earned, but, if there has been any such, certainly no part of it has been absorbed in the State demand.

" 12. We have in the preceding paragraphs confined ourselves mainly to an explanation of the general principles upon which the right of the State to a recognised share of the produce is based. We do not think it necessary to review in detail the statements submitted by the Chief Commissioner, which are very clearly elucidated and explained in the letter by which they are accompanied. We only desire to point out that they fully confirm our opinion that the enhancements of rent and revenue, when compared with the enormous increase in the value of produce, are reasonable and even moderate, and to represent that the balance left as proprietary profits, as shown in the tables appended to the Chief Commissioner's letter, is considerably larger than the landlords had any reasonable claim to expect."

*Previous proposals
for permanent
settlement.*

26. The explanation given in the preceding paragraphs of the principles on which the assessment of progressing Provinces is based does not allude to the movement in an opposite direction which was set on foot in a Despatch from Sir Charles Wood thirty years ago. The determination was then expressed that in order to avoid the uncertainty and harassment caused to agriculturists by recurring assessments, the settlement throughout India should be gradually made permanent. It was acknowledged that in backward tracts the measure must be deferred.

But it was laid down that those tracts which were ripe for permanent settlement should be at once ascertained and that a commencement should be made in the North-West Provinces. A very full history of the action taken on these proposals is contained in the "Note" on Lord Ripon's administration, which comprises an interesting minute by Lord Mayo on the difficulties of assessing the value of land.

27. It is sufficient in this Summary to state that the proposals were found impracticable, that no districts in the North-West Provinces could be declared ripe for permanent settlement, and that no material changes were made in consequence of Sir Charles Wood's Despatches, which indeed remained unanswered until 1882 when the subject was brought under renewed consideration by Lord Ripon. In the meantime a radical reform had been introduced in the North-West Provinces which opened the way to the removal of the harassment and inquisitions of periodical assessments. Hitherto the settlement of land revenue had involved the visitation of each district by an army of measurers and valuers of land rightly designated as an invasion of mercenaries, who occupied the invaded country for sometimes as long a term as eight or ten years. The reform introduced was the maintenance of maps and records in each village by the village officer himself. For this purpose as many as 40,000 village accountants had, in the one Province alone, to be taught elementary survey and the method of keeping the maps and land records up to date, while not less than 700 or 800 peripatetic supervisors had to be instructed how to inspect and control them in their work. The reform was more or less completely carried out between the years 1875 and 1880, in which latter year the Famine Commissioners recommended the extension of the system throughout India. The reorganisation in 1881 of the Department of Revenue and Agriculture already described in Chapter II of this note gave the opportunity of setting this policy on foot, and it was for this reason mainly that the present Secretary who had directed the reforms in the North-West Provinces, was appointed to organize the new Imperial Department.

The reform of the village staff.

28. Thus it happened that when Lord Ripon renewed the question of a permanent settlement in all periodically assessed Provinces he found himself confronted with a very different position from that which existed when Sir Charles Wood's instructions were received; for the harassment and expenditure, on which Sir Charles Wood had laid so much stress, entailed by periodical assessments, had been eliminated from the programme. Nevertheless it was incumbent on the Government of India to deal finally with Sir Charles Wood's Despatches which had been lying in the record room for 20 years without reply, and the possibility of a permanent settlement had to be once more brought under serious discussion. Sir Alfred Lyall and Sir Charles Aitchison, the Lieutenant-Governors of the North-West Provinces and the Punjab, were in 1883 summoned to join in a Conference at Simla. It was shown that a permanent settlement would deprive the state of a legitimate source of income which was derived in a form to which the people were by long historical usage accustomed; that the share of the produce always enjoyed by the State was a claim to which the landowners offered no

Its effect on the discussion.

resistance; and that even if the State were to resign its own rights, the landowners would refuse to extend a similar concession to their tenants. It was ultimately agreed that the idea of a permanent settlement should be definitely abandoned.

*The permanent
system of settlement.*

29. At the same time the discussions of 1883 were productive of valuable results. They proved that in the 'Ryotwari' provinces where there was no middleman between the State and the occupier of a holding a "permanent system of settlement" could be established. By this phrase was meant that the classification of soils and the assessment of rates already determined could be accepted as a basis for all future assessments without renewed investigation of the value of land and without alteration of the relative proportion of assessment-rates. Future enhancements of revenue were to be made only on three simple grounds: (1) the rise in prices or the value of produce, and this was the most important; (2) the extension of cultivation; (3) State outlay on agricultural improvement, chiefly canals and large works of irrigation. The ryotwari provinces are Madras and Bombay, Burma and Assam. In *Madras and Bombay* the initial classification and assessment were coming to a close, and in these Provinces the new policy was at once fully accepted and proclaimed. Lord Lansdowne's Government has had little more to do in these Provinces than to urge economical reforms having for one object the speedy completion of the initial settlements and for another the organization of village establishments for maintaining the maps and land records. What has been done in the latter direction is explained in the chapter on surveys. In *Lower Burma* the initial settlement is making rapid progress and will, when completed, become the basis of a 'permanent system of settlement.' In *Upper Burma* the initial settlement is now commencing and Lord Lansdowne has just submitted a complete programme of operations to the Secretary of State. In both the Upper and Lower Provinces measures have been taken under Lord Lansdowne's Government for the organization of village agencies for the maintenance of the map and record.

*Madras and
Bombay.*

Assam range.

30. In *Assam* where the old settlement is now expiring no attempt at the classification of land had ever been made, and the question has recently been under the consideration of Lord Lansdowne's Government whether the time is yet ripe for effecting it. The decision has been against the measure. The assessment rates now imposed are very low, and it is found that an adequate enhancement can be easily made without entering upon enquiries which could only have been hastily instituted in the short time available before the new assessments are due. It has been determined, therefore, to make a summary ten years settlement at rates which though resulting in a considerable enhancement, are intrinsically light, and during the next decade to work out, through the agency of the Land Record Department, a satisfactory classification of soils and lands which may serve at the end of the ten years as a permanent basis of all future settlements.

*North-Western
Provinces and Oudh.*

31. Turning now to the temporarily settled 'Zemindari' Provinces or those in which there is usually a middleman between the occupying cultivator and the State a different policy has had to be followed.

These Provinces are the North-West Provinces and Oudh, the Central Provinces, the Punjab, and some districts in Bengal. The conditions differed in each, and each therefore had to be dealt with in a somewhat different manner. In the *North-West Provinces and Oudh* it has been determined that otherwise than in exceptional cases no further classification of soils is needed, and that the share of the State shall be restricted to one half of the rentals obtained by the landlords, land in the cultivation of the landlords being assessed at the average rates paid by tenants. The action of the Imperial Government during Lord Lansdowne's Viceroyalty has chiefly aimed at restricting the tendency of the Local Government to revert to the elaborate system of classifying land and at securing as strict an adherence as possible to the policy of having the assessments on the maps and land records maintained by the village establishments. Some difficulty has been experienced in enforcing the policy, but the present Lieutenant-Governor, Sir Charles Crosthwaite, has come into thorough accord with Lord Lansdowne's Government on the subject and has issued instructions which will within a short time preclude the necessity of any further injunctions from the Government of India. The system of assessment will then become practically permanent and land revenue will rise automatically with the rise in rentals without the periodical inquisition entailed by regular settlements.

32. What has been done in the *Central Provinces* has been already *Central Provinces.* described in the opening paragraphs of this Chapter. The main difference between that Province and the N.-W. Provinces is that in the former the State, and in the latter the landlord, determines the tenants' rents. At present the rates are far too low to be accepted as a permanent basis for future settlements, but the classification of soils has been thorough and will not be repeated.

33. The *Punjab Province* has presented greater difficulties. There *Punjab* the landowners are, as a rule, themselves the cultivators and are more in the position of the ryots of South India than of the tenant-ruling landlords of the Central and North-West Provinces. But the rates paid by them to the State are intrinsically low, and have, in comparison with the rapid increase in the value of produce, due to the connection of hitherto remote districts by railways to the seaports and to regions of deficient food-supply, sunk far below the fraction to which the State by long established custom is entitled. The question how far the settlements now being made can under these circumstances be accepted as a permanent basis for future assessments has therefore been postponed, though it is one which demands early investigation. But an important step has been taken by Lord Lansdowne's Government in arranging definitely with Sir Denis Fitz-Patrick the principles upon which the current assessments should be made, and these practically require that before the new rates can be accepted, on the principles adopted in Madras and Bombay, as a permanent basis of future settlements, some adequate attempt shall be made to ascertain approximately what the net assets of the landowners really are. Lord Lansdowne has agreed with the Lieutenant-Governors, past and present, that the Province is one in which for political

reasons the settlement should be kept within moderate limits, and when the more precise information required under Lord Lansdowne's instructions has been obtained as to the value of the land it will be possible to bring the Punjab assessments upon a more permanent footing, and to do away with inquisitorial settlement proceedings.

Bengal.

34. Of the temporarily-settled districts in *Bengal* little need be said, except that during Lord Lansdowne's Viceroyalty the important administrative divisions of Orissa and Chittagong have been brought under survey and settlement, and that as far as possible the general policy adopted in the North-West Provinces has been followed. The assessments will shortly be made, and when they are reported the question whether they can be accepted as a permanent basis for future settlements will be brought under consideration.

Economy effected.

35. It may be noted, briefly, in connection with the policy which Lord Lansdowne's Government has so strongly supported of substituting indigenous village establishments with a continuously maintained record for foreign agency with a periodically revised record, that the economy effected has been very large, amounting, in the Provinces where the system is adopted, to several lakhs per annum. This can be easily understood from the following figures. The old system involved an expenditure of from R300 to R600 a square mile, while the present system secures a complete map and record for R50 to R100 a square mile, and as the areas for which maps and records have to be provided are expressed in thousands of miles, it is not difficult to conceive what a saving is effected. The estimates submitted in 1887 showed an advantage of from 15 to 20 lakhs a year.

Gwalior.

36. Lord Lansdowne's Government has been the first to bring about the introduction of the system in a Native State. This measure has, partly through Lord Lansdowne's personal influence, been effected in *Gwalior*, the hereditary State of the Scindias, which is equal in area to about one-half of the Central Provinces. In spite of a not unnatural objection to the employment of an European officer the Darbar was, at a personal interview with Lord Lansdowne's Revenue Secretary, persuaded to trust the survey operations to an officer of the Land Record Department in the North-West Provinces (Colonel Pitcher), who has succeeded in obtaining the complete confidence of the Darbar and the Maharaja and in surpassing in economical working all the Land Record Departments of British India. The maps and records are now being completed for less than R30 a square mile entirely by indigenous establishments. The Maharaja himself set a notable example in preparing, unaided and with his own hands, the map and record of a village which were presented by him to Lord Lansdowne. The secret of success in Gwalior has been that the new system is founded entirely on native customs and practices. The discarded system on which land has been for so many years surveyed and assessed in British India was the real innovation, and the reform effected has mainly consisted in a reversion to the indigenous system of maintaining maps and records by village establishments.

*Attitude of the
Secretary of State.*

37. To the Despatch which was quoted in the first part of this Chapter the Secretary of State replied in a manner which indicated

acquiescence in the principles and policy which had been so clearly expressed in it. The Government of India had accordingly no hesitation in issuing a Resolution to Local Governments and Administrations in which they impressed upon them the duty of guarding the State revenue against loss by adopting either a system of progressive enhancements or shorter terms of settlement in those cases in which the wealth of the proprietors had grown so fast that the full share due to the State could not be taken from them suddenly without causing embarrassment. The Secretary of State, who controls Settlement Administration in Madras and Bombay, was asked to communicate these instructions to the two presidencies. The Secretary of State, notwithstanding his silent acquiescence in the previous despatch, has now demurred to the restriction of the term of settlement without further knowledge of the opinion of the Local Governments and of the people, and has hinted that if the land revenue has to be increased, the question should be considered whether funds should not be raised from the permanently settled provinces. The Secretary of State's Despatch had not been dealt with when Lord Lansdowne left.

The principal Despatches bearing on this chapter are :—

Despatch No. 86, dated 28th October 1891, to Secretary of State.

{	„	„ 57,	„ 5th September 1893,	„	„	„
	„	„ 147,	„ 23rd November	„ from	„	„

CHAPTER V.

COLLECTION OF LAND REVENUE.

Methods of Collection

38. After fixing the amount of land revenue which can be justly taken from a specified tract of country, it remains for the Government to see that it is collected in the manner least oppressive to the people. The importance attached to the subject is illustrated by the fact that the chief officer in every district is designated Collector, and every Native official in subordinate control of every sub-division of a district has a vernacular title meaning the same thing (*Tehsildar*).

The old method

39. The indigenous system of collecting land revenue still prevailing in Native States was extremely elastic. In the days of Akbar the Mahomedan rule was that "there shall be left for every man who cultivates his lands as much as he requires for his own support till the next crop be reaped, and that of his family, and for seed. This much shall be left him; what remains is land tax, and shall go to the public treasury." It consists in taking a recognised fraction of the actual or its equivalent in cash of the crop raised. Native rulers have always imposed far higher rates of assessment than their British successors. Nevertheless, the revenues have been paid without material disturbance of the agricultural community.

Want of Elasticity

40. The main defect of the system of collecting land revenue substituted by the British Government for that prevailing under Native rule is the absence of elasticity. Instead of a cultivator or landowner being required, as formerly, to surrender to the State a proportionate share of his crops, he is now compelled to pay into the treasury at each harvest a fixed sum, without any regard to the outturn of his fields. This alteration has seriously affected the prosperity of all agricultural communities who raise produce under insecure conditions. They have to pay as much when crops fail as when they succeed. The question of making in these cases some return towards the old Native system was pressed upon Local Governments in connection with the Famine Commissioners' report; but, except in the Punjab, where tracts liable to inundation are subject to an elastic demand, no active reforms in the required direction have been adopted in any province.

Its results

41. The substitution of the absolute rigidity introduced by the British Administration for the elasticity of Native rule has had two results: one disastrous to the proprietors of land, the other detrimental to the State Exchequer. Owners of estates required, as they have been, to pay up a demand which the sale of their produce was insufficient to meet have had to sell or mortgage their estates. The land of the community has passed, or is rapidly passing, out of their hands. Bankers and money-lenders are in many parts of the country taking their place. The process has been enormously facilitated by the power of transfer which the early British administrators conferred upon all, whether of high or of low degree, who held rights and interests in land. Under Native rule they had no such power. The two innovations combined, that is, the substitution of rigidity for elasticity and the conferment of unrestricted right to transfer, are working the slow ruin of the landed

classes and rousing a spirit of discontent in many parts of India, which is fraught with grave political danger.

2. During the last 50 years attempts have been made to arrest the process by continually lowering the rate of the Government demand. This remedial action has only been, and can only be, a temporary reparation, at the same time it has involved a serious and continuously increasing loss to the State Exchequer. Lord Cromer, when Financial Member, wrote a strong note on the subject of a too rigid demand, but he did not deal with the question of transfer. The Resolution of the 12th October 1882 on elasticity of collection was founded on Lord Cromer's Note, but the injunctions therein contained in respect to elasticity of collection could never have had much lasting effect without some simultaneous action in connection with transfer. *The question of transfer*

43. The subject has now been dealt with in connection with the amendment of the Deccan Ryot Relief Act, and an account of the action which Lord Lansdowne has himself either taken or advised will be found in Chapter VII of this Summary. *Action taken*

CHAPTER VI.

RELATIONS OF LANDLORDS AND TENANTS.

*Legislation of the
last 20 years*

44. During the last 20 years there has been a growing tendency to establish the tenants of the country in a stronger position. The Famine Commissioners' Report led perhaps to the awakening of public opinion on the subject, but independently of this it would have been taken up by the Administration. A large proportion of the officials who have come to India since the Mutiny belong to a different school to those of the ante-Mutiny days. There were strong signs before Lord Ripon assumed the Viceroyalty, that in the North-Western Provinces, in Bengal and in Oudh, a powerful section of the officials were determined to make themselves heard in defence of the tenants, and the Famine Commissioners therefore merely applied the torch to the pile when they insisted that the subject should be brought under serious consideration. The opportunity soon came. Lord Ripon's proclivities lay in the same direction. In almost every province the Tenancy Codes required revision. One after another they were taken up, and in every case the revision carried with it the conferment of greater security upon the tenants. The most important case of all and the one which demanded the strongest advocacy of the pro-tenant officials in consequence of the predominating strength of the landlords was that of Bengal.

Madras.

45. During Lord Lansdowne's Viceroyalty the subject has been brought up in connection with two provinces. In Madras, notwithstanding the strong recommendations of the Famine Commissioners, no action had been taken during the last 20 years to provide for the protection of tenants in the permanently settled districts. The position there was very much like that which prevailed in old days in Bengal. The Madras Administration was urged by Lord Lansdowne's Government to hasten the measures which it was known they were contemplating for legislation in the matter, and at last during the final month of Lord Lansdowne's Viceroyalty the Bill came. It is framed on the lines of the Bengal Act, but falls short of it in many important particulars. Lord Lansdowne desired that the Madras Government should be told that the Bill must be closely examined with the view of strengthening the position of the tenant before it can receive the assent of the Governor-General in Council, and proposed that the officer representing Madras on the Legislative Council at Calcutta should go through the Bill with a Bengal officer who had been closely associated with the construction of the Bengal Act. Here the matter rests.

Central Provinces.

46. The second case is that of the Central Provinces. In that Province the new Tenancy Act was passed in 1883, but its provisions have been found inadequate for securing that amount of protection for the tenant which was contemplated when the Act was passed. Sir Antony MacDonnell, one of the authors of the Bengal Tenancy Act, brought this to light when Chief Commissioner of the Province, and Lord Lansdowne's Government has strongly urged the Local Administration to amend the law before fresh difficulties should arise in the way of its

revision. The subject is now under the consideration of the new Chief Commissioner of the Province.

47. One general measure which has been persistently advocated by Lord Lansdowne's Government for the protection of the tenant is the continuous maintenance of the cadastral maps and records-of-rights. The necessity of the record-of-rights for the adequate protection of the tenants had been fully acknowledged before Lord Lansdowne's arrival in all provinces except Madras. But in Bengal the acknowledgment of it had not led to any positive movement, and successive Lieutenant-Governors notwithstanding their approval of the measure had shrunk from taking action. Then Sir Charles Elliott assumed charge of Bengal. He had been the author of the Famine Commissioners' Report in which the policy of protecting the tenant by means of a survey of his lands and of the record of his rights had been strongly urged. He offered to commence and carry through the measure which had so long hung fire, and Lord Lansdowne accepted his offer. In a letter written on the 18th September 1891, the sanction of the Government of India was communicated in the following terms:—

Maps and Records of Rights.

In Behar.

"The Governor-General in Council fully appreciates the necessity for most careful consideration before committing himself to the undertaking. But he is nevertheless convinced by the powerful arguments which are presented in the 6th paragraph of your letter, as well as by the opinions that have been recorded in previous correspondence by Sir Charles Elliott's predecessors, that the measure is indispensable for the effective administration of the province and for the protection of the agricultural classes of Behar. His Excellency in Council is also impressed with the belief that no opportunity for setting the project on foot more suitable than the present is likely to be found. The task is one which from its magnitude and importance is not likely to be successfully undertaken by a Lieutenant-Governor whose term of office is nearing its close. Sir Charles Elliott has only recently acceded to the government of the province; his special experience in other parts of India and his known mastery of the subject mark him out as exceptionally competent to direct the administration of an undertaking which involves the survey and record-of-rights in a large territory; moreover, he has fully satisfied the Government of India in his present letter that he clearly understands both the difficulties which have to be surmounted and the advantages which are to be gained in carrying out the measure. After full consideration the Government of India accept Sir Charles Elliott's view that the results of the project will be worth the trouble and the risk which it will entail, and His Honour may, subject to the Secretary of State's approval of the scheme, count on receiving their fullest support in his conduct of the undertaking."

48. The proceedings of the Government of India were confirmed by the Secretary of State in these words, quoted from His Lordship's Despatch of December 1891:—

Approval of the Secretary of State.

"After a careful consideration of the whole subject, I cordially concur with your Government in accepting the decision of the Bengal Government that a survey should be made and a record-of-rights should be prepared in North Behar. When the work is once begun, it should be prosecuted with all the economy and expedition that may be possible without impairing the correctness of the result. I trust it may be found possible to train and employ in the undertaking a considerable number of Behar villagers, so that the survey may leave behind it an indigenous agency capable of maintaining correct field maps and records hereafter. I am confident that your officers will do all in their power to make the survey operations as little irksome to the people as possible. But some little disturbance to the people is inseparable from such an undertaking; and it is therefore desirable to carry it through as promptly as possible."

Maintenance year by year

49. When sanction was accorded to the proposal to commence the survey and record-of-rights without delay, it was contemplated that the measure would be followed by a scheme for maintaining the maps and records up to date. Sir Charles Elliott had himself intimated that this was his intention in the letter in which he asked leave to commence the survey, though he expressed the belief that in Behar, where the patwari organization had fallen into disuse, it might be desirable to establish a separate agency, the nature of which he briefly described, and promised that when he had consulted his revenue officials he would submit a further report on the subject. Lord Lansdowne agreed to this proposal, and the Secretary of State in communicating his sanction to the initial survey, took the opportunity of expressing his satisfaction that the necessity of maintaining the record-of-rights year by year had not been overlooked.

Proposals regarding continuous maintenance in Behar.

50. When Sir Charles Elliott left India on furlough in April 1892, the Government of India were still awaiting the promised report. Sir Antony MacDonnell, who succeeded to the Lieutenant-Governorship of Bengal, submitted a provisional scheme which closely agreed with that which had been roughly sketched by Sir Charles Elliott and proposed to hold a Conference in Mozufferpur, the planters' capital of Behar, for the purpose of more fully considering the scheme. Lord Lansdowne expressed his gratification that the views of the two Lieutenant-Governors on this matter were in such close agreement, and desired that the Secretary in the Imperial Department of Revenue should be allowed to attend the Conference. The Conference was held in August 1893. In September, Sir Antony MacDonnell submitted the Bill and rules, which he considered necessary for carrying out the proposals of the Conference, and suggested the imposition of a cess not exceeding 3 pies in every rupee of rental, from the proceeds of which the new establishment should be paid. When the Bill and rules were received by the Government of India, it was represented to Lord Lansdowne that there would be considerable difficulty in criticising the proposals without the advice of experts; that the continuous maintenance of maps and records in other Provinces was a new policy; that the systems developed in each province were found to differ in some important points; that the opportunity might usefully be taken to bring the varying practices in other Provinces than Bengal, as far as possible, into conformity, and that when the general principles on which the record should be maintained in outside Provinces had been settled, the question how far they could be adapted to Bengal should be taken up. Lord Lansdowne agreed in these views and desired that a Conference should be held in Calcutta during the winter season. This he considered the more necessary, as it was understood that Sir Charles Elliott had since 1892 somewhat changed his views which were not now in accord with the scheme submitted by Sir Antony MacDonnell who, as Member in the Revenue Department, would be mainly responsible for the final decisions of the Government of India. The position was one therefore in which the conclusions of a conference of experts would save the Government of India from some embarrassment. The Conference

would also carry with it the advantage of providing the best available criticism on the Bill, and the rules would afford an opportunity of mitigating the opposition of the Behar landlords by associating their representatives in the deliberations of the Conference.

51. In the meanwhile there had been growing up a strong agitation *Opposition to the survey* against the survey and the record-of rights, as well as against the cesses from which the cost of these measures had to be defrayed. Meetings were held in Calcutta and in Behar of landlords, of planters, and of ryots respectively. The co-operation of the Congress was enlisted; certain Members of Parliament were induced to ask questions in the House of Commons; finally the agitation culminated in strong memorials from the Landlords' Associations in Behar. These were dealt with in two comprehensive and able Minutes by Sir Antony MacDonnell, who, as one of the principal authors of the Rent Act, was exceptionally conversant with the reasons which led to those provisions in the Act which contemplated the framing of the map and record-of-rights in those districts of Bengal in which it may be required. He gave convincing proof that the main object of those provisions was the protection of the tenant against the landlord. He produced clear evidence that the tenant in Behar stood in exceptional need of such protection. He satisfied the Government of India that the landlords themselves would ultimately derive benefit from the maintenance of a record of their rights, that the work of Civil and Revenue Courts would be facilitated, and general administration would be materially improved by the measure; that there was no real agitation on the part of the tenants against the project, of the merits or demerits of which, though it was designed for their protection, they were practically ignorant. He considered that the opposition of the landlords whom he had met at the Mozufferpur Conference was materially mitigated by the assurances he had given them, that the patwaris whom they had come to look upon as their private servants would not be utilized either for purposes of survey or maintaining the map or record, notwithstanding that the existing law gives to the Government the power of enforcing their employment. He strongly urged that the records-of-rights would be useless unless they were continuously maintained. Sir Antony MacDonnell's Minutes were accepted by the Government of India as a complete answer to the memorials which had been submitted. They were forwarded with this opinion to the Secretary of State, who has in a Despatch, dated 14th December 1893, concurred in the decision of Lord Lansdowne's Government, so far as regards the prosecution of the initial survey and record. The Minutes were placed on the table of the House of Commons.

52. As regards the maintenance of the map and record, the Confer- *Conference of January 1894* ence which met in the first week of January 1894 at Calcutta have supported the general principles of the policy embodied in Sir Antony MacDonnell's Bill and rules. The experts from other provinces protested strongly against adopting the device of a periodical revision of the map and record, and insisted that the protection of the tenant could not be secured unless the records were kept up to date. At the time when this summary was written, the Conference had just

completed their proceedings, in which they confirmed the general principle of the Bill and rules as submitted by Sir Antony MacDonnell.

Share of the cost to be borne by Government.

53. One other issue which, in connection with the initial survey and record-of-rights, as distinct from the maintenance of the record, remained unsettled at the time of Lord Lansdowne's departure was that of the share which the Government of India should accept in the cost of the proceedings. It had been decided, when the scheme was first submitted to the Secretary of State, that the Government should pay for so much of the expense as could be fairly debited to the construction of topographical maps which must sooner or later have been made at the cost of the State for purposes of general administration and for the convenience of the public. This it was understood would amount to one-eighth of the whole. The remaining seven-eighths were in accordance with previous instructions from the Secretary of State equally divided between the landlord and the tenant. The Secretary of State has more recently intimated his willingness that the State should bear a larger share; but both the Local Government and the Government of India have decided that there is no sufficient ground for a further contribution by the Government, and in the last week of Lord Lansdowne's Viceroyalty a Despatch was addressed to the Secretary of State informing him of this decision.

Sir Charles Elliott's recommendations.

54. In the same Despatch the proceedings of the Conference were submitted to Lord Kimberley with a Minute on their proposals by Sir Charles Elliott. In deference to the views of the Lieutenant-Governor, the Government of India intimated their willingness to allow the scheme to be introduced gradually. Sir Charles Elliott recommended that the measures taken should be restricted to the appointment of sub-registrars, one in each sub-division of a district, to whom the holders of rights and interests in land, including occupancy tenants, should be required, under the penalty of a fine, to report mutations. The salaries of these officials could be probably met by fees. He deprecated the imposition of a cess and the establishment of peripatetic officials, which measures would, he urged, be unpopular and difficult to work on account of the novelty of the system, which the people did not understand and his officials were not trained to carry out.

Future expansion of the scheme.

55. Lord Lansdowne agreed to this on condition that the Bill was introduced in its present form, so as to admit of the scheme being expanded hereafter if Sir Charles Elliott's half measure proved inadequate. In other words it should be left open to future administrations both to add the peripatetic to the sedentary staff if the latter were found ineffective for securing the objects in view and to impose a cess sufficient to defray the salaries of the inspecting officials.

A collection of the Despatches and other papers connected with the survey and the maintenance of land records and maps in Behar has been separately prepared.

CHAPTER VII.

STATE AID TO THE AGRICULTURAL CLASSES.

56 The Famine Commissioners in 1880 recommended that the Acts providing for cash loans to the agricultural classes should be so widened and framed as to facilitate the grant of loans for works of improvement or the purchase of seed and of cattle in times of agricultural distress. This measure was taken under Lord Ripon's administration, and Lord Lansdowne's Government have taken every opportunity to promote the operation of the new Acts by urging Local Governments to make use of them. Lord Lansdowne has been strongly supported in this policy by Lord Harris in Bombay and by Lord Wenlock in Madras. The following table showing the amounts advanced in India during the last 10 years indicates the gradual progress which is being made in this direction :—

	R
1881-82	4,80,800
1882-83	7,13,300
1883-84	9,78,600
1884-85	10,39,950
1885-86	9,24,100
1886-87	8,25,100
1887-88	9,10,200
1888-89	11,54,100
1889-90	16,78,800
1890-91	20,68,800

57. Considerable development was given to the system in the Madras Presidency by the issue in 1883 of a series of special 'well rules, under which the cultivator was assisted to find a site for his well and then provided with money for its construction at 3 (afterwards raised to 4) per cent. instead of the $6\frac{1}{2}$ per cent. usually charged for State loans. The rules were at first introduced tentatively in a few districts, but the proof given of their usefulness by the recent famine induced the Government of India in 1891 to permit their adoption in any district in the Presidency.

58. The question has arisen whether some final arrangement could not be made for creating a special fund devoted to Agricultural loans. It has been sometimes found that the grants made in the annual budgets for this purpose are insufficient, and that Local Governments have been obliged to refuse the loans which were demanded. This is the only question which Lord Lansdowne has left for further consideration in connection with the operations of the Loans Acts.

59. The policy of promoting agricultural banks was for the time being disposed of under Lord Dufferin's administration by a decision that the administration of agricultural banks by State agency was impracticable; but the question has arisen in a new form in the Madras Presidency, where a Commission has recently been appointed for the purpose of reporting on a scheme for subsidizing agricultural banks maintained under private management.

*Relief of indebted
proprietors.*

60. A further method of relieving the agricultural classes consists in the management by the State itself of the lands of the indebted proprietors or by the provision of special laws by which they obtain special protection from their creditors. In 1892 Lord Lansdowne gave his special sanction to an important Act, under which the Bengal Government is empowered to take under management the estates of proprietors who admit themselves to be incompetent to administer them. This provision had already existed in the laws of the Upper Provinces, and its extension under Lord Lansdowne to Bengal led to a recent application from the Madras Government for the introduction of some such law in that Presidency. The Madras case remains unsettled.

*Deccan
Agriculturists'
Relief Act.*

61. The most important question, however, which has been brought under consideration under Lord Lansdowne's Viceroyalty is the amendment of the Deccan Agriculturists' Relief Act.

Its objects

62. This Act was originally devised for the protection of the Deccan ryots against the money-lenders who were fast obtaining possession of their lands. It was not found to work smoothly and required amendment, and although a full account of the case will be found in the summary of the Home Department, to which the responsibility of dealing with purely judicial Acts belongs, yet the history, past and future, of this piece of legislation is so bound up with the system of land revenue administration and with the question of State aid to the agricultural community that it will be useful in this summary to give a brief and comprehensive account of the whole position.

*Indebtedness in the
Punjab and Central
Provinces.*

63. Among the causes which have led to the widespread and increasing indebtedness of the possessors of landed interests, including in this term ryots in Bombay and Madras and proprietors, tenure-holders, and occupancy tenants in all provinces, are rigidity of collection and the confinement of right of transfer. This view was urged in the report of the first Deccan Commission of 1875; it was indicated in the report of the Famine Commission in 1880; and has been brought forward in various notes submitted in the Revenue Department, of which the most important was an analysis of the Bombay system written in 1884. In March 1887 the Secretary of State called for a report on the indebtedness in the Punjab. In 1888 this was submitted by Sir J. Lyall, who promised a further communication, which was not however received till August 1891, a few months before his departure. In his letter the evils due to transfer were strongly insisted on and immediate action urged. The Government of India decided that the advice of Sir D. Fitzpatrick should be awaited, but no further communication has as yet been received from the Punjab. In August 1887 Lord Dufferin called for a report on the condition of the rural population in all Provinces. In the reply from the Central Provinces allusion was made to indebtedness caused by transfer, and an intention expressed to report again after further enquiries. The further report was received at the end of 1889, in which the evils due to transfer were strongly denounced by Sir A. Mackenzie, who was of opinion that the subject should be examined by an Imperial Commission. In August 1889, and again in April 1890, Mr. Bradlaugh asked whether any

legislation was contemplated to prevent transfer in the Central Provinces. This question was answered by a promise to take up the whole subject in connection with other Provinces.

64. In 1891 arrangements were made to appoint a Commission to enquire into the working of the Deccan Act, and action on the Punjab and Central Provinces cases was deferred pending the receipt of the Commission's report. That report was received in August 1892, but the greater part of it consisted in recommendations for the amendment of the Act, which being concerned with matters of purely judicial procedure, are dealt with by the Home Department, and no distinct conclusion was arrived at as to the policy of checking the transfer of land. In the meantime intimation was received from Burma and from Bengal, that steps might be necessary to prevent the free transfer of tenancy rights. *The Commission of 1891.*

65. In 1892 the report of the recent Deccan Commission was sent to the Central Provinces, and Sir A. MacDonnell had no hesitation in stating in his reply that "the true remedy lies in a limitation of the right of transfer" now possessed by landowners, including "privileged classes of cultivators." The question has since been referred for the consideration of Mr. Woodburn, the present Chief Commissioner. *The Report of the Deccan Commission.*

66. The Deccan Commission was practically confined in the scope of its enquiries to judicial issues connected with the working of the Act, but was given permission to mention any other matters which they might think worthy of notice outside the Act, and they took advantage of the reference to draw attention to the primary causes of indebtedness, rigidity of collection and transfer. It then became a question what course should be taken for the investigation of these questions. *Scope of its enquiries*

67. Lord Lansdowne recorded his opinion that an enquiry of some sort was necessary, that another Commission would be intolerable in this age of Commissions, and that it might be advisable to depute a special officer to the different Local Governments for the discussion of the question with their most experienced officers. As it had been already proposed to place the present Secretary of the Revenue Department, Sir E. Buck, on special duty for other reasons, the Secretary of State was told that, if the general arrangement was sanctioned, it was proposed to add this duty to those which would be otherwise entrusted to the special officer. The representation to the Secretary of State was made in the following terms :— *Proposed enquiry.*

"But we have a further and important motive for requiring at the present time the services of a peripatetic officer acquainted with at least the general principles of land revenue administration in all the provinces. When, last year, we had under consideration the appointment of a Commission to enquire into the working of the Deccan Agriculturists' Relief Act, we entertained great doubt whether a general Commission should not be appointed for the investigation of the causes of proprietary indebtedness in other provinces as well as in Bombay. We had received, as Your Lordship is aware, voluminous reports both from the Punjab and the Central Provinces which indicated that defects in the land revenue system might, as we knew to be the case in the Deccan, be a primary cause of agricultural impoverishment. The unrestricted power of transfer which had been suddenly, and it is now thought injudiciously, conferred upon landholders and cultivators by past Administrations was among the most prominent of these defects and on no subject perhaps are more diverse opinions held. We determined, however,

that as a first step the Commission should be confined to the actual working of the Act in Bombay. We did not wish to create the excitement, or to undergo the expense and delay, which would have been involved by a more extended enquiry until the issues connected with the Act itself had been narrowed and brought under consideration.

"9. The Deccan Commission in Part III of their Report have now written so strongly on the necessity of reforming the land revenue system that we cannot postpone enquiry any longer. Simultaneously, representations have come up from Bengal insisting on according greater security to the ryot, and with that object placing restrictions on his power of alienation. The question of transfer is still pending in the Central Provinces and in the Punjab. We do not believe that any legislation of the character of the Deccan Act, which at best is aimed rather at cure than at prevention, will satisfy either the public mind or ourselves, unless the transfer question and other important issues connected with the land revenue system are thoroughly considered in connection with it.

"10. We should prefer not to appoint another Commission. We believe that an examination of the subject can best be made by the local Governments themselves. At the same time it is incumbent on us to guard against the introduction of unduly divergent policies in the various provinces; we must at least see that the Local Governments have the opportunity of 'applying the experience of one province to the improvement of the systems obtaining in others'; we must obtain a thorough and impartial knowledge of the facts and issues ourselves; and we must bring the local authorities everywhere to a positive and serious examination of the subject. At present the questions are drifting, partly because they present so many practical difficulties, and partly because the Revenue officials are pressed with other work. What we intend now is that each local Government shall be invited to form a provincial committee of their most experienced Revenue officers, and that our Secretary shall be deputed to act in association with the several provincial committees, and to co-ordinate the results of their proceedings. We shall thus ensure that every issue and every opinion worth considering will be brought before each local Government in turn, and that the whole subject will come before ourselves and before Your Lordship in a complete and comprehensive form."

Sanction refused.

68. Shortly before Lord Lansdowne's departure, a Despatch was received from the Secretary of State regretting his inability to sanction the general arrangement, and the question, therefore, of the character of the enquiry which should be made still remains without decision. The Secretary of State made no allusion to the subject in his Despatch.

Lord Lansdowne's views.

69. Lord Lansdowne has, however, in a Minute which he has left on record in the Home Department on the amendment of the Deccan Ryots Act, strongly urged, in the following words, that an enquiry should be instituted by the Revenue Department at an early date :—

I desire, however, to place on record my opinion that legislation of this kind will only touch the fringe of the great question of agricultural indebtedness, which is forcing itself upon our attention with a yearly increasing strength. It is, to my mind, impossible to read the mass of evidence which has come before us from Bombay, from the Central Provinces, from the Punjab, and even from parts of Bengal, without coming to the conclusion that remedies of an entirely different kind are indispensable if the evil is to be held in check. For this reason I should look forward with more confidence to the result of reforms of the kind which will, I hope, be the outcome of the inquiry to be undertaken by the Revenue and Agricultural Department than to the extension of the Deccan Act to other parts of India. These further reforms will, in my belief, fall under three great heads: first, the further extension of the system of advances to cultivators; secondly, the introduction of a greater element of elasticity into our revenue system; thirdly, measures for restricting the right of land transfer.

Volumes have been written upon these subjects, and I will not attempt to discuss them now. There is, I fancy, no difference of opinion as to the advantage of a liberal system of loans to cultivators. The transaction is a perfectly safe one

for the Government of India, and it is, I presume, only owing to financial considerations that we have, up to the present time, not done more in this direction.

As to the second point, I am well aware of the immense difficulty of laying down rules under which the Local Governments might be required to exercise greater indulgence in the matter of revenue collection. It is a comparatively easy matter to lay down the general principles as they were laid down by the Famine Commission. See paragraph 167 of part I of their Report, which should be read. The difficulty is to apply the principles in practice, and the Local Governments, as we are well aware, are ready to resent interference. The views of the Government of India were expressed in the Resolution of the 12th October 1882, and if it is made clear that due weight must be given to these views, something will have been gained. A land revenue, fluctuating according to the character of the season, would, from our point of view, be intolerable, but there is all the difference in the world between such a system and that which now obtains: a system under which it can happen that no remission is made in a part of the country where the existence of scarcity has been officially proclaimed, and at a time when the ryots are borrowing money with which to pay their land revenue at such rates as 24 per cent. Remissions of revenue in consideration of real scarcity, and remissions made in ample time, so as to render it unnecessary for a ryot to sell his stock, or to borrow at usurious rates, would be all that we could, in my opinion, require. I hope that, if Sir Edward Buck is deputed for this purpose, he may find it possible to arrive, without much trouble, at an understanding with the Local Governments upon this most important question. The last two pages of Sir Charles Crosthwaite's admirable Note of November 23th, 1892, contain a number of wise observations upon this subject. I quite agree with him that the attempt to fix the revenue for an average of years, upon the theory that the exceptionally good years are set off against the exceptionally bad, breaks down in the case of small proprietors. It is idle to expect that they will save their money in good years in order to meet the deficiencies of bad ones.

I will not attempt in this Note to discuss the questions of restrictions upon land transfer. The thing is no doubt wrong from the purely economical point of view, but we have to deal with a serious political danger, and I see no way out of it but this.

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The principal Despatches, Resolutions, etc., bearing on the subject of this chapter, are:—

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| { | Despatch No. 42, dated 4th April 1889, to Secretary of State. | | |
| | „ No. 62, dated 4th May 1893, from „ „ | „ | „ |
| | „ No. 70, dated 18th October 1893, to „ „ | „ | „ |
| | „ No. 149, dated 23rd Novr. 1893, from „ „ | „ | „ |
| { | Resolution No. 70—95, dated 27th November 1893. | | |

CHAPTER VIII.

IRRIGATION

The Government's policy.

70. Irrigation was a subject which was brought under a separate chapter heading in the Note on Lord Ripon's administration, in view of the importance which the Famine Commissioners attached to it. But, except in connection with the grant of loans for the construction of wells dealt with in the preceding chapter, and with the progress made in the construction of canals, dealt with in the Public Works Department Summary, there is little to record in this note except the general statement that Lord Lansdowne has strongly supported the policy accepted by his predecessors. Under that policy the Agricultural community are exempted permanently or temporarily from any enhancement of revenue on lands irrigated from works constructed by themselves, whether wells or canals; while the improvement due to works constructed by the State is to be assessed *at full rates*. Thus, on the one hand, the people are induced to co-operate in the extension of irrigation, and, on the other, funds are more readily forthcoming for the construction of canals which bring in, under the policy of a full assessment, a remunerative income. It has been found necessary under Lord Lansdowne's administration to explain this policy to the Local Governments and to require that effect should be given to it.

Extension of area.

71. The following table shows the areas irrigated in all provinces, except Bengal for which figures are not available in the first and last years, respectively, of Lord Lansdowne's administration :—

	1887-88	1891-92.
	Acres.	Acres
Madras	6,234,432	5,721,713*
Bombay and Sind	2,417,436	3,161,183
North-Western Provinces	6,208,299	7,319,087
Oudh	2,448,267	2,656,218
Punjab	6,990,682	7,848,221
Central Provinces	516,160	686,269
Lower Burma	6,042	5,237
Upper Burma	546,357
Berar	44,732	43,316
Coorg	500	500
Ajmere-Merwara	69,141	103,957
Total (excluding Bengal)	24,936,091	27,592,088

* Owing to more favourable rains irrigation was less resorted to than in 1887-88.

CHAPTER IX.

SURVEYS.

72. The Imperial Survey of India is divided into three main branches *Trigonometrical*—Trigonometrical, Topographical, and Revenue. The Trigonometrical Survey or Principal Triangulation which furnishes the basis for other Surveys would have been completed when Lord Lansdowne arrived but for the annexation of Upper Burma and the acquisition of protective rights in the North-Western Frontier. The Topographical Survey *Topographical* has followed the Trigonometrical into both these regions. Elsewhere the Topographical Survey parties have been engaged in mapping the State forests or in making skeleton surveys as a basis for cadastral field-plotting for the purposes of the Revenue Survey. The great *Revenue* change which has taken place in the last few years, especially under Lord Lansdowne's administration, in the conduct of Revenue Surveys, is that the field-plotting is now, as a rule, done by the village officials. During Lord Lansdowne's tenure of office the Madras Government which had long opposed the system has been induced to adopt it, and in the last year has been training several thousands of the village accountants. Bombay is the only Province in which the policy has not been fully accepted. As stated in the second chapter, it has been introduced into one of the most important of the Native States—Gwalior—entirely in consequence of Lord Lansdowne's action in deputing his Revenue Secretary to confer with the Durbar of the State on the subject. The work done by the Imperial Survey Department for the five years under review has been about 50,000 square miles of topographical work; 20,000 square miles as a basis for field mapping by village officers; and about 20,000 square miles more in which the field-plottings have been done by the Department itself, principally in Behar.

73. In both the Bombay and Madras Presidencies the Cadastral *Bombay and Madras* Survey is now coming to an end. The questions which have during Lord Lansdowne's Viceroyalty attracted attention are, firstly, how the survey officers should be disposed of when the work is completed; secondly, how the survey maps and records should be maintained and kept up to date. In Bombay, the first question has been disposed of by drafting three or four officers into the Imperial Department; three more into the Provincial Land Records Department, and by pensioning off so many of the remainder as are not required for completing the cadastral programme. The maps are to be kept up by somewhat more expensive agency than village officials, but no steps have yet been taken to establish a proper record-of-rights. During the last twelve months a Committee has been convened to consider the subject. In Madras the surplus survey officers have been utilized on the advice of Lord Lansdowne's Government in training the village officers, and the question has recently arisen whether they ought not to be employed on the cadastral survey of the permanently-settled districts, for the better administration of which the Madras Government has recently

submitted an important Tenancy Bill to the Government of India. Both maps and records will henceforth be corrected and kept up to date by the village officials, who are now undergoing a thorough training in the methods of cadastral survey. A word must be said in conclusion about Sind. Fortunately this Administrative Division of the Bombay Presidency is under an officer who thoroughly appreciates the advantages of the Imperial policy, and who has submitted a scheme for the maintenance of a survey and record-of-rights in Sind in entire accord with the principles approved by the Government of India.

CHAPTER X.

STATISTICS.

74. One of the principal duties imposed on the Department by the Famine Commission was the collection and publication of agricultural and economic statistics. Convinced of the administrative necessity of prompt, accurate, and complete statistical information, and impressed with the imperfections of the existing machinery for collecting it, the Commission recommended the appointment of a special statistical officer for each district. This measure would, however, have involved not only a serious addition to permanent expenditure but an undesirable interference with the authority and responsibility of the district officer. Nor was it necessary. In most provinces there already existed, as part of the regular revenue establishment subordinate to the district officer, a village agency capable, after proper training, of maintaining an accurate record of the agricultural and economic circumstances of every acre of occupied land and of every member of the rural community. And, as the Famine Commissioners themselves perceived, the first and real measure of reform required was that the village agency should be re-organized and rendered efficient, that it should be supplied with accurate maps and records to start with and trained to maintain them. It is to the accomplishment of this task that the Department has, as elsewhere explained, principally devoted its energies during the past twelve years.

*Statistical duties
imposed on the
Department*

75. In the meanwhile other branches of statistical enquiry have not been neglected. The provincial Departments of Land Records have in addition to the compilation of agricultural returns, developed a system of internal trade registration which furnishes statistics of very high value for administrative and commercial purposes. The various Scientific Departments under the control of the Revenue and Agricultural Secretariat, such as the Departments of Meteorology, Geology, Forests, and Economic Products, have within their respective spheres been engaged in the collection and record of all facts and figures which have a practical bearing on the promotion of agricultural interests and the development of the resources of the country.

*Information
obtained from these
Departments.*

76. During the past five years the provincial Departments have under the direction of the Imperial Department annually submitted a series of valuable returns, of which the most important are the tables of agricultural statistics, an abstract of which is presented to Parliament.

*Statistics submitted
by the Provinces.
Agricultural
returns.*

77. Since 1887 the area for which they are prepared has been extended by nearly 100,000 square miles. The important province of Bengal still appears as a blank in the returns, but the cadastral survey of Behar, commenced under Lord Lansdowne's administration, will partly remove this defect.

Enlargement of area.

78. In addition to the annual statistics the Provincial Governments now issue forecasts of the area and outturn of the principal crops of commercial importance, which are compiled and published for the use of the commercial public in India and in Europe. Definite rules have lately been laid down for estimating and exhibiting the condition and prospects of the crops and, to meet the wishes of the commercial

Forecasts.

community, by whom these reports are greatly valued, arrangements were made in 1891-92 to include information from Native States in which the staples under consideration are extensively cultivated.

Outturn.

79 Arrangements have recently been made, at the instance of the Secretary of State, for the preparation of a further return showing the average outturn per acre of every important crop in the country.

Inland Trade.

80. The Provincial Governments also supply the Department with voluminous returns, annually and quarterly, of the internal trade of the country, showing the quantity and value of commodities exported from one province to another or to the seaports.

Advance made.

81. Considerable advance has been made under Lord Lansdowne's administration in developing this branch of statistics.

Minerals.

82. The above does not exhaust the list of the statistics which float up from the Provincial Governments to the Central Office. Within the last three years arrangements have been made for the submission of an annual report designed to show the mineral resources of the country, in which figures of outturn are supplied for coal, iron, salt, and petroleum, and general information, with rough estimates of output, for other minerals.

The undigested mass.

83. Thus a vast mass of statistics—returns of mineral resources, figures for inland trade, estimates of crop outturns, forecasts of crop prospects, and a variety of statistical information on revenue, economic, and agricultural subjects—flows in monthly and annually into the Imperial Office. There for the present it rests. For directing and co-ordinating the work of subordinate offices, for devising methods of presenting in the most popular and useful forms the immense quantity of agricultural and economic facts annually collected, for focusing and digesting these facts, and for studying their bearing on the administrative problems of the day, no machinery is forthcoming. The returns received are either republished in a manner almost mechanical or remain unutilized.

Attempts made to improve the condition of things: in 1890.

84. This unsatisfactory condition of things was represented in 1890 to the Finance Department.

"While the Imperial Department," it was said, "has been able to prosecute with some measure of success, through the agencies under its control, the policy which it laid down for its guidance in 1881, it is unable, owing to the weakness of the establishment at its command, to fulfil the responsibility resting upon itself of bringing together, reviewing, and rendering generally intelligible the extensive collections of rough statistics which it receives from the local agencies. The clerical staff available for the purpose is limited to a superintendent and three assistants, whose time is also partially occupied with other subjects; and the great increase (nearly 100 per cent.) during the past seven years in the correspondence of the Department renders it impossible to strengthen it by additions from other sections of the establishment. At present the only strictly statistical compilations which it has been found possible to prepare in the Secretariat consist of a set of agricultural tables required by the Secretary of State for Parliament and quarterly and annual returns of inland trade. They are published without reviews, and constitute a very inadequate fulfilment of the original programme of the Department.

"Pending the organization of the Provincial Agricultural Departments and the statistical machinery under their control, and pending also the establishment on a solid footing of the Land Record system, which, from a purely financial point of view, was the most important of their duties, the consideration of the statistical work

of the Secretariat might, it was felt, be postponed. But these objects have now been attained in a degree which makes it incumbent on the Imperial Department to take up the part in the general system which properly belongs to it. Not only should the whole series of current agricultural and traffic statistics be annually reviewed and worked up into an intelligent history of the circumstances and progress of the country, but old sources of information, which in their existing form are useless for practical purposes, should be rendered available to the Administration. In short, the 'systematic and continuous investigation of facts,' in respect to which the Secretary of State requires progress to be reported, ought now to be seriously begun. It is impossible that this can be attempted with any prospect of success, except through the agency of a trained and permanent staff."

85. An additional staff of moderate proportions was accordingly applied for to cope with the work, but the suggestion did not commend itself to the Finance Department and the matter dropped. In 1891, however, the Department sought the advice of Mr. Baines, then Census Commissioner for India, and Mr. O'Connor, the officer who issues and reviews the Foreign Trade and other returns issued by the Department of Finance and Commerce: and these officers after examining the records of the Department presented a joint report which was forwarded in June 1892 to the Finance Department with a request that permission might be given to apply to the Secretary of State for the establishment of a Statistical Bureau under a Statistical Reporter. The Finance Department in replying recognised the desirability of establishing a bureau of this nature, but were for financial reasons unable to support it.

in 1891-92.

86. Meanwhile the Secretary of State has himself recognised the inadequacy of the manner in which the economic information at the disposal of Government is presented to the public, and has in a recent despatch suggested the periodical appointment of a special officer for the preparation of a decennial 'economic census.' The question therefore of improving the present condition of the returns is once more under consideration.

The matter again under consideration.

The principal Despatches bearing on the subject of this chapter are:—

Despatch No. 62,	dated	4th May	1893,	from	Secretary of State.
"	"	70	"	18th October	1893, to
"	"	149	"	23rd November	1893, from
				"	" "

CHAPTER XI.

AGRICULTURAL IMPROVEMENT.

Policy pursued.

87. In the Resolution with which the department opened a much wider signification was given to agricultural improvement than attaches to the popular acceptation of the term. It embraced measures of every description having for their object the "maintenance of agricultural operations at the highest attainable standard of efficiency."

Enquiry first, then improvement.

88. To ascertain the nature of these measures it was laid down that the first step necessary was the organization of a machinery for the collection of agricultural facts, the next an analysis of the circumstances and conditions of each district, the third the application of remedies within the reach of legislation or administrative action. Attempts at the direct reformation of agricultural practice were deliberately postponed until a safe foundation of facts and statistics had been secured, not only because any other course would have led to wasteful expenditure of public revenues, but because past experience had demonstrated the futility of such attempts when directed by imperfect knowledge. "It may," it was observed in the Resolution above referred to, "as time goes on, become the duty of the Department to enquire how far the physical researches of the West may be beneficially applied to the agricultural system of this country, and to associate with itself in this investigation the assistance of qualified experts. Engineering science would be required for the construction of works of irrigation or of improved agricultural implements; the science of the veterinary surgeon will be necessary, when the breeding or diseases of cattle are dealt with; the science of forestry is called for in arboriculture and reboisement, and science of divers kinds for the development of various industries. Finally, the science of agricultural chemistry will be demanded for the solution of many important agricultural problems."

Purposes of the chapter

89. The other chapters of this Summary give evidence of the action which has been taken in many ways to improve indirectly the agricultural efficiency of the country, and this chapter will be confined to a notice of the more direct measures initiated during the five years under review.

Provision of scientific staff for completion of agriculture analysis

90. Of these, the most important has been the provision of a scientific staff to conduct investigations in those branches of enquiry which are beyond the scope of the ordinary establishments, and beyond the means and ability of the agricultural community to accomplish.

Necessity for Agricultural Chemists.

91. The need for an expert to investigate the vital questions of soil, water, and manure and to diffuse a knowledge of the teachings of agricultural chemistry had from the first been foreseen, and from 1882 to 1888 representations were made to the Secretary of State that the scheme of enquiry could not be completed without an agricultural expert "who should organize and develop a system of agricultural investigation in those directions in which scientific control was wanted." While admitting the importance of the object in view, Lord Cross was not satisfied that it would be attained by the

measures proposed, and upon the advice of Sir James Caird, one of the members of the Famine Commission, Dr. J. Augustus Voelcker, the Agricultural Chemist of the Royal Agricultural Society of England, was deputed to "advise on the best course to be adopted in order to apply the teachings of agricultural chemistry and in order to effect improvements in Indian agriculture."

92. Dr. Voelcker came out on his mission in December 1889, and after touring throughout the country submitted an abstract report of his conclusions and recommendations. A Conference of agricultural officers was held at Simla in October 1890 to discuss them, but final orders were postponed until the complete report should be received. Dr. Voelcker urged, however, the immediate appointment of an Agricultural Chemist, and the Secretary of State eventually selected for this post Dr. J. W. Leather, Professor of Chemistry at the Harris Institute, Preston. An Assistant Chemist was engaged at the same time, chiefly for educational duties. *Dr Voelcker's mission*

93. The agricultural chemists arrived in the winter of 1892, but Dr. Voelcker's detailed report was not received till the middle of the following year—1893. A second Conference was then convened to discuss the final report, and their recommendations upon it will shortly be communicated to Local Governments. *His report and recommendations.*

94. Dr. Voelcker laid great stress on the importance of making agricultural instruction part of the general educational system of the country, and on the necessity of extending education generally among the agricultural classes, in order to enable them to understand and co-operate in measures of improvement. This subject had already been discussed at an Agricultural Conference held at Delhi in 1888 and was commended to the attention of Local Governments in a Resolution on education issued by the Government of India in the same year without resulting in any positive action, but it is now being renewed in connection with the quinquennial review on education under issue by the Home Department. *Agricultural education.*

95. Lord Lansdowne's Government has been the first to take positive measures designed to lead to the protection of the cattle of the country against disease and murrain. Want of the necessary agency to give effect to legal provisions and religious prejudice against the slaughter of cattle had always stood in the way of legislation. In 1866 an Act was passed in Madras for dealing with diseased animals, but it proved inoperative. In 1869 Lord Mayo's Government appointed a commission on cattle plagues, but its report was followed by no immediate action. In 1884 the Punjab Government urged that the isolation of cattle suffering from contagious diseases should be made compulsory, but was overruled. In 1890 a request for repressive legislation was made by the Government of Bombay. The Government of India, however, expressed the view which was subsequently accepted by the Bombay Government, that it would be advisable to await the further organization of veterinary establishments and the accumulation of information regarding cattle diseases which it would be the duty of that agency to collect. The latest proposal for cattle-disease legislation has come from Burma where the people are said to desire it, but the *Cattle-disease legislation.*

details of the measures proposed have not yet been submitted to the Government of India.

*Adoption of
preventive
measures*

96. The policy of Lord Lansdowne has been to prepare the way for preventive measures. Repressive measures are peculiarly impossible in a country in which infected cattle may not be slaughtered by their owners, and the only course remaining is to protect the cattle by vaccination against disease. The initiation of a protective system was facilitated by a movement which had already taken place for the establishment of a Civil Veterinary Department, of which the first duty was to be the encouragement of horse-breeding for military and other purposes. The new Department was founded in the spring of 1892, and a special branch of the central staff was entrusted with the investigation of cattle-disease. One officer has been required to collect through the Provincial veterinary officers all available facts and statistics regarding each disease that prevails in India.

Vaccines.

97. Another officer, one of the leading workers in bacteriological science in Europe, has been employed in the study of vaccines. The latter began work in Poona where the climate was found unfavourable, and a new locality has recently been selected for his laboratory in the North-West Himalayas. Rinderpest, which is believed to cause the death of over a million of cattle yearly, is the disease for which a vaccine is most required, and will be the primary subject of investigation in view of the fact that vaccine experiments are impossible in Europe where, unlike India, infected cattle must be immediately slaughtered.

*Promotion of
horse-breeding*

98. In the meanwhile important steps have been taken to promote horse-breeding. Hitherto the Government had been content to provide and maintain at State cost 300 stallions imported from Europe. Under the new arrangements these are supplemented by stallions (generally Arabs) purchased in the country through the agency of the officers of the Veterinary Department, and paid for as well as maintained by local boards and leading proprietors of land. An important Despatch on the subject was addressed to the Secretary of State by Lord Lansdowne and his Council on the 21st October 1891.

*Minor agricultural
questions*

99. Among minor questions of agricultural improvement which have recently come under consideration are fuel and fodder reserves, protection of insectivorous birds, enquiry into agricultural insect pests, promotion of fruit culture, and development of the wine industry in Kashmir and silk industry in Bengal.

The principal Despatches, Resolutions, etc., bearing on the subject of this chapter are:—

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|---|--|
| { | Despatch No. 104, dated 10th December 1888, from the Secretary of State. |
| { | Despatch No. 6, dated 1st June 1889, to the Secretary of State. |
| { | „ „ 21, „ 18th Feb. 1891, to „ „ „ |
| { | Resolution No. 24—21, dated 22nd June 1893. |
| { | Despatch No. 80, dated 21st October 1891, to the Secretary of State. |
| { | Circular No. 18—54, „ 25th May 1892. |
| { | „ „ 41—47, „ 27th October 1893. |
| { | „ „ 21—118, „ 1st June 1893. |
| { | „ „ 1—23, „ 8th February 1892. |
| | Despatch No. 65, dated 27th September 1893, to the Secretary of State. |

CHAPTER XII.

EMIGRATION

100. The value of emigration in relieving and redistributing the excess population of this country has always been appreciated by the Government. The part which has been taken by the State is not confined to the encouragement of emigration, but is extended to the control of the treatment of labourers who have emigrated and to their protection from ill-usage. *Two branches of the Government policy*

101. Emigration proceeds to the West Indies, to Natal, the Mauritius and Fiji and to the countries or islands in the vicinity of India, *viz.*, Ceylon, the Straits Settlements and the provinces of Burma and Assam, which two provinces may in regard to emigration be considered to lie outside India proper. *Direction of Emigration*

102. The important measures taken under Lord Lansdowne's administration have been the deputation of an officer to enquire into the condition of the coolies in the West Indies; an attempt to open up the lands of Upper Burma to labour from India; negotiations with the Borneo Company for emigration to that island and with the Dutch authorities for emigration to their possessions in the Eastern Seas; the amendment of the Straits Settlements Emigration Law; the deputation of an officer to Réunion to arrange for the renewal of emigration to that Colony, to which in common with other French Colonies emigration had been prohibited by Lord Lansdowne's predecessors; and, finally, the revision of the law regulating emigration to Assam. *Measures taken.*

103. The deputation of the officer, Dr. Comins, to the West Indies was followed by a report, in which it was shown that the coolie is on the whole well treated in each of the four principal colonies, Demerara, Trinidad, Jamaica, and St. Lucia. Recommendations were, however, made for the improvement of the laws regulating emigration, and these were recently forwarded to the Secretary of State with the views of the Government of India. *The British West Indies.*

104. The condition of the emigrant has been similarly safeguarded in the colonies of Mauritius and Natal, where the coolie population is one of considerable magnitude. The Mauritius was visited in 1893 by the special officer deputed to Réunion, whose report is still awaited, and in Natal an effort of the white population to extend the term of coolie indenture from 5 to 10 years and to prevent the settlement of the coolies after completion of the term of original indenture was successfully resisted by the Indian Government. There are some further points under discussion with the Natal authorities which will be considered in consultation with delegates now expected at Calcutta. *Other British Colonies*

105. The interests of the coolies need, however, to be far more strictly watched in Foreign than in British Colonies. *Foreign Colonies.*

106. At present no emigration to French Colonies is allowed: that to Cayenne was stopped by the Indian Government in 1877, that to Martinique and Guadeloupe in 1888, and that to Réunion in 1882. The inconvenience to the Colonies has been in some cases considerable, and Lord Lansdowne's Government have considered carefully the strong *French*

representations which have been made by the French Government on the subject. In the case of Martinique and Guadeloupe the opportunity of Dr Comins' visit to the West Indies in 1891 was taken to reconsider the decision of 1888, but with the result that the Government of India determined to adhere to the prohibition in force. The same decision has recently been arrived at in regard to Cayenne. In the case of Réunion, it was considered advisable to depute an officer to the island, and Mr Muir Mackenzie, late Under-Secretary in this Department, was chosen for the task. His report was received in November 1893, and has been referred to the Governments of Bengal and Madras for advice, but the Government of India have expressed a provisional opinion that immigration should be permitted, subject to the acceptance by the French Government of certain stringent conditions, to which the Colonial Government has already assented, and which will secure for the labourer, among other advantages, a shorter term of indenture and full freedom to settle on completion of term of his service.

Dutch

107. Unlike the French, the Dutch have always treated Indian emigrants in a proper manner, and in Surinam the condition of the coolies was discovered by Dr. Comins, who visited the Colony in 1891, to be satisfactory. He found himself able indeed to recommend further concessions to the Colonial authorities than either the British Consul or the Government of India thought prudent to support. Having considerable confidence in the treatment accorded by the Dutch to their coolies, and observing the enormous field for emigration afforded by the Dutch Colonies in the East, the Government of India entered into negotiations in 1888 with the Dutch authorities for opening emigration to the Netherlands East Indies on terms particularly favourable to the Colonists. Delegates from Java came to Calcutta. A Convention was drawn up, but in consequence partly of a change of Government in Holland and partly of the objection raised to the appointment, on which the Government of India insisted, of an Indian Officer as Protector of Immigrants, the negotiations fell through.

Proposals for the development of emigration

108. There has been correspondence during Lord Lansdowne's term of office as to the possibility of emigration to Sarawak, to Zanzibar, to the territories of the British East Africa Company and to the Niger Coast Protectorate, as well as to the less promising fields of Brazil and Guatemala, but so far with no result. In North Borneo the Government advanced in 1891 as far as to issue a proclamation containing regulations for the protection of Indian immigrants, but they have since failed to appoint an Immigration Agent and have thus blocked the commencement of emigration. Similarly in Queensland an Enabling Act was drafted, but a change of ministry in the Colony rendered it abortive, while in South Australia an Act for the regulation of coolie labour in the Northern Territory was actually passed, but fell flat owing to difficulties raised by the Colony as to the pay of a Protector.

The Straits Settlements

109 Progress in emigration to the Straits Settlements has been more satisfactory. During Lord Lansdowne's tenure, the Straits Immigration Ordinance has been amended, mainly in favour of the coolies, and emigration has been legalized to several of the protected States.

The Straits emigration is already free from the restrictions imposed by the Indian Colonial Emigration Act, being controlled entirely by ordinances passed in the Colony itself, and it is hoped that before long it may be found possible to place the Straits Settlements on the same footing in every way as Ceylon and Burma in the matter of emigration.

110. Emigration to Ceylon has for some time been left entirely to *Ceylon* private management

111. The steps taken during Lord Dufferin's Viceroyalty to *Burma* encourage permanent emigration to Burma have not so far led to any very marked results, but a considerable amount of unassisted emigration, both of a permanent and of a temporary character, is in course of development. The number of emigrants proceeding yearly for temporary employment to Burma from Bengal and Madras is between 100,000 and 200,000.

112. The large emigration to the Assam tea gardens is regulated by *Assam* an Act passed in 1882. The provisions of the Act rest on the principle that, as the coolies are engaged at some expense from a considerable distance, the employer is entitled to bind them by a penal contract for a term of years, but is, in return for this, compelled to make special arrangements under Government inspection for their health and comfort. The emigrants were recruited in four ways:—

- (i) Through contractors, who collect emigrants by means of licensed recruiters, and were required to register them in the districts of recruitment.
- (ii) Through "Garden-sirdars" or servants of the planter. The recruits of Garden-sirdars were examined, registered, and put under contract in the district of recruitment.
- (iii) Through specially licensed "local agents" of the employer in the districts of recruitment.
- (iv) On a system of "free emigration," recruits found their own way to Assam and were engaged in the province by the planters.

113. The object of the Act of 1882 was to encourage the second class *Object of Act I of 1882* of emigration in preference to the first, and the fourth in preference to either, the idea being that as communications improved the contracts might in time be left to the operation of the ordinary law. At the same time the interests of the planters were safeguarded by increasing the term of the penal contracts under the Act from 3 to 5 years.

114. Lord Hartington, while allowing the Act to have its course, *Its working and amendment* objected to the extension of the term of contract, and asked for a report on the working of the Act after three years' experience. Special reports were accordingly submitted by the Local Governments of Bengal and Assam in 1886 and again in 1891. The subjects chiefly discussed in these reports were (1) the mortality on tea gardens, (2) the abuses connected with recruitment, and (3) the system of penal contracts. These and other subjects were very fully discussed during 1891 and 1892, and early in 1893 an Act (No. VII of 1893) was passed for the amendment of Act I of 1882, of which the main features were the introduction of sanitary measures; and of measures for restricting kidnapping and similar malpractices; the abolition of compulsory registration in

districts of recruitment ; and the reduction of the term of contract from five to four years. The Secretary of State has since raised an objection to the fixing of the term of contract at four years and suggested the amendment of the new Act accordingly. The Government of India has, however, objected to so early a revision of the amended Act and has proposed that it be given a trial until 1895, at the end of which year the Secretary of State requires a report to be submitted.

*Government
Emigration
Schemes*

115. Emigration under Government supervision for the reclamation of waste land and the relief of congested tracts, has, as a rule, been carried on on a petty scale only and with indifferent success. The large Canal schemes in the Punjab have, however, opened up considerable tracts of waste : more especially on the Sidhnai Canal on which emigration was started in 1886 : the Sohag and Para Canals on which it was started in 1887 : and the Chenab Canal on which it was started in 1892.

The principal Despatches bearing on the subject of this chapter are :—

Despatch No	7,	dated	14th January 1891,	to the Secretary of State.
"	"	7,	15th February 1893,	" "
"	"	8,	15th February "	" "
"	"	77,	5th October 1891,	" "
"	"	13,	11th February 1892, from	" "
"	"	12,	23rd March 1893,	" "
"	"	50,	25th July "	" "
"	"	32,	19th October "	" "

CHAPTER XIII.

ARTS, MANUFACTURES, AND ECONOMIC PRODUCTS.

I.—*Arts and Manufactures.*

116. It was represented by the Famine Commission, in their Report of 1880, that the distress occasioned by failure of crops was much aggravated by the fact that so large a proportion of the population was dependant on agriculture for its subsistence, and that any legitimate action of Government for the encouragement of a diversity of occupations would tend to lessen the evil. *Aims of the Department*

117. The efforts of this Department have been almost entirely in the direction of making known to the general public the industrial resources of India. It is understood that the most legitimate form of encouraging the development of industrial occupations and counteracting the influence which European imports have in withdrawing from native artizans their natural form of work, is to take every opportunity of investigating and making known to the general public, both in and outside India, the openings that exist for trade in the native products and manufactures of the country. This is the policy which the department has, during the last five years, consistently followed. It has systematized the exhibition of artware and manufactures in museums and has fostered enquiry into the art industries of the people. It has collected together and published all the existing information on the economic products of India, and has arranged for the continuous investigation of the country's resources. It has encouraged, so far as financial conditions will permit, the exposition of the samples of arts and natural products in foreign and local exhibitions, in Imperial and Provincial museums, and in the new Imperial Institute. It has also provided for the publication of a quarterly *Journal of Indian Art and Industries*. *Work done*

118. A Conference of the Principals of Schools of Art has recently been convened under the orders of Lord Lansdowne's Government, at Lahore, where a Provincial exhibition was opened on the 1st January last, for the purpose of drawing up a programme for the further encouragement of Indian art and for the extension of drawing as part of the educational system of the country. *Encouragement of Arts.*

119 They were required to consider a despatch received from the Secretary of State in the Home Department suggesting the abolition of schools of art as State institutions. The report of the Conference had not been received at the time of Lord Lansdowne's departure. *Abolition of Art Schools.*

II.—*Economic Products.*

120 In the Despatch of 1881, which confirmed the establishment of a separate Department of Revenue and Agriculture, the Secretary of State pointed out the importance of collecting and publishing information regarding the economic resources of India ; but it was found impossible to do much in this direction until 1884, when a special officer was attached to the Department for the purpose of collecting products for the Calcutta International Exhibition of that year. The catalogue of these collections revealed their imperfect character, and in 1887, the Secretary of State agreed to the permanent establishment of the post of "Reporter on Economic Products." The first duty assigned to the *Work done by the Reporter*

Reporter, Dr. Watt, was the compilation of a Dictionary of the Economic Products of India, and this work he brought to a successful conclusion in 1893, while on two years' leave.

121. The officer who officiated for him has been required to make further investigations on subjects in respect to which Dr. Watt's compilation had shown that information was imperfect: he has been employed in collecting illustrative specimens for Museums and the Imperial Institute: he has issued the "Agricultural Ledger Series" and the "Agricultural Lesson Sheets" to which reference is made in chapter XI: and he has prepared 'Handbooks' to the Imperial Institute collections, by which the public are provided with the fullest information on each of the more important products in a cheap and easy form.

Botanical Survey.

122. The Botanical Survey of India, though not directly connected with other than purely scientific objects, may be mentioned in this place. Up to 1890, the Botanical officers employed in the several provinces worked independently, and were under no central direction. In pursuance of recommendations made by the Director of the Royal Gardens at Kew, a Botanical Survey of India was constituted in 1891. The country was divided, for purposes of botanical exploration, into four charges, which were allotted to the Superintendent, Royal Botanic Gardens, Howrah; the Government Botanist, Madras; the Principal, College of Science, Poona; and the Director, Botanical Survey, Northern India, respectively. The general direction of the Survey was confided to the Superintendent of the Botanic Gardens at Howrah, the principal repository of botanical specimens and information in India, who holds the designation of Director of the Botanical Survey of India and works in close consultation with the Kew authorities. These measures have been taken entirely under Lord Lansdowne's administration.

III.—Exposition in Exhibitions, Museums, and the Imperial Institute.

Foreign Exhibitions.

123. The commercial public in India is so small and the expenses entailed by State exhibits so great that as a rule the Government of India do not take part in Exhibitions outside the country unless they are strictly international and afford a likely opening to branches of Indian trade.

Government participation in them.

124. During the last five years the Indian Government have taken part in two Exhibitions only, *viz.*, at Chicago and Antwerp. In view of the small amount of trade between India and America, it was determined to confine State patronage of exhibits at Chicago to three classes—Artware, Tea, and Timbers. A subvention of ₹10,000 was granted to Messrs. Tellery, a private firm, for the representation of Indian artware, and all subsequent arrangements were left in their hands. A contribution of ₹40,000 was given to the India Tea Association for a tea room. The forest products were collected by Government officers at an expense of ₹9,000.

Antwerp Exhibition.

125. A small subsidy has been granted for the establishment of a cigar and coffee room at the Antwerp exhibition of 1894.

Exhibitions in India.

126. Within India itself, local Exhibitions have been held from time to time; but the first important Exhibition was that held at

Calcutta, in 1883-84. An Exhibition has been opened recently at Lahore, but it is being arranged for entirely by the Provincial authorities.

127. There is an Imperial Museum in Calcutta called 'the Indian *Museums.* Museum'; and there are Provincial Museums at Lucknow, Lahore, Nagpur, Bombay, and Madras.

128. The Indian Museum is a Trust which was constituted by Act XVII of 1866, and of which the constitution was subsequently amended by Act XXII of 1876. In 1887 the law of the Trust underwent further modification to allow of the transfer to the Museum, at the instance of this Department, of the Economic and Art collections belonging to the Government of Bengal. By Act IV of 1887 the number of Trustees was increased, and they were empowered to assume the custody and administration of collections which do not form part of the original Trust. Under the operation of this Act the Government of Bengal has recently built an annexe to the Museum for the accommodation of the Art and Economic collections which have been made in recent years chiefly by the Revenue Department. These have now been constituted national collections and placed under the control of the Trustees. *Indian Museum, Calcutta.*

129. The Imperial Institute was founded in 1886 in commemoration of the Jubilee of Her Majesty's reign. Its objects, to quote the words of the Organizing Committee, are "to illustrate the great commercial and industrial resources of the Colonies and India, and to spread a knowledge of their progress and social condition." Very liberal contributions towards this memorial were made by the Indian peoples and chiefs, the subscriptions amounting to Rs15,00,000, or more than a fourth of the subscriptions from all sources. *Imperial Institute.*

130. The Institute comprises a distinct Indian section, and fifteen Indian representatives sit in the governing body. As the current income of the Institute is at present unable to meet the whole expenses, it is temporarily supplemented by grants from Indian revenues which, including the cost of collections made in this country, amount to about Rs19,000 a year. *Indian Section.*

131. Having regard to the large share taken by India in the foundation of the institution, His Excellency's Government have naturally been desirous that it should prove of practical benefit to the country, and have steadily borne this purpose in mind in guiding the organization of the Indian section. The Government of India have now endeavoured to make use of the Institute for the promotion of Indian interests by urging the governing body to distribute information regarding Indian products and to procure the assistance of specialists in each branch of trade in England or Europe in making trials and analyses which cannot be made in India of any Indian products that may be insufficiently known to the commercial community and these are numerous. This policy has within the last year been carried into practical effect by the Institute authorities. *Analysis of products.*

The Principal Resolutions issued in connection with this chapter are :—

Resolution No. 5151, dated 26th February 1891.

Resolution No. 34—43, dated 20th July 1892.

CHAPTER XIV.

ARCHÆOLOGY.

Three branches of work.

132. The archæological work undertaken by the State is of three kinds, *viz.*—

- (i) Survey, or the continuous exploration and description of objects of archæological interest ;
- (ii) Conservation, or the record and protection of objects worthy of being preserved ; and
- (iii) Epigraphy, or the methodical collection and publication of ancient inscriptions.

(i) *Survey.*

The Archæological Survey Department.

133. The systematic survey of Indian archæology was commenced more than 30 years ago, and the arrangements concluded during Lord Lansdowne's term of office may be said to mark the beginning of its end. Archæological researches, which had previously been carried out by societies and individuals, aided from time to time by liberal contributions from the Court of Directors, were placed by Lord Canning in 1862 under the organized control of an Archæological Department, superintended by Colonel (afterwards Sir Alexander) Cunningham. With a short interval in 1866—1870, Sir A. Cunningham directed the Department till his retirement in 1885, and the results of his investigations were published in a well-known series of reports.

Past researches.

134. Sir A. Cunningham's researches were confined to Northern India. In Bombay a separate survey was started in 1873 under Dr. Burgess, who published the results of his explorations in a series of "Western India Archæological Survey Reports," and in 1881 the archæological work of the Madras Presidency was also placed under Dr. Burgess.

Changes since Sir A. Cunningham's retirement.

135. On General Cunningham's retirement in 1885, the work in Northern India was divided among several separate survey parties working under the general control of Dr. Burgess : but the arrangement was made for five years only, and when Dr. Burgess retired in 1889, the opportunity was taken to reorganize the Department. It was felt that the archæological survey of the most important and interesting regions had—so far as can be the case with any such work—been completed, and that it was now necessary only to gather up the results. Dr. Burgess, therefore, entered into an agreement by which he undertook, in return for a fixed scale of payment, to publish from England the information collected by the various surveys during his term of office : and the archæological staff was, from the 1st October 1890, reduced to three parties working in Western, Southern, and Northern India, respectively.

Cessation of State connection.

136. These parties have, in addition to their short annual records of progress, prepared some special reports on particular matters of interest, but none of these have as yet been published. The sanction to the appointments in Northern India expires in October 1895, and the Secretary of State has expressed a wish that the direct connection of the State with the work of Archæological Survey should throughout India cease from the end of that year. The question remains what

action should be taken in regard to the unsurveyed portions of the Empire.

(ii) *Conservation.*

137. Efforts were made from 1867 onwards to obtain lists of objects of Archæological interest with a view to their conservation : and from 1880 to 1883 a special officer was appointed as Curator of Ancient Monuments. In 1883, however, it was determined that the work of preservation should be entrusted to the Local Governments, and orders were issued which prescribed the preparation of lists on a uniform plan. *Preparation of lists of monuments.*

138. The preparation of these lists has been held by the Government of India to be the necessary preliminary for the actual work of conservation, and efforts have been made during Lord Lansdowne's term of office to hasten their completion. Considerable progress has been made, and arrangements have been set on foot by which the lists should be finished within a short period of years. With their completion the work of conservation will devolve entirely on the Department of Public Works. *Progress.*

(iii) *Epigraphy.*

139. The collection of epigraphical matter was for a long time entirely in the hands of private persons, but, after the establishment of the archæological survey, the attention of the Surveyors working under Government was attracted to the record of inscriptions which were met with in the course of the survey. In 1886 local Governments were asked to assist the Surveyors in preparing lists of existing inscriptions. *Collection.*

140. The aid of Government has, however, been mainly given by assisting the publication of inscriptions already discovered. Two volumes of the "Corpus Inscriptionum Indicarum" have been issued by the Government, one prepared by General Cunningham, containing the Asoka Inscriptions, and one prepared by Mr. Fleet, containing the inscriptions of the early Gupta Kings. From 1888 a quarterly publication entitled the "Epigraphia Indica" was issued by Government under the editorship of Dr. Burgess, and this publication is now about to be completed. The work will be hereafter continued through the agency of the Indian Antiquary, a private Journal, subsidized by the Government for the purpose. *Publication.*

141. An Epigraphist to the Government of India was appointed in 1883, but retired in a few years to take up the editorship of the Antiquary. In 1886, Dr. Hultzsch was made Epigraphist for the Madras Presidency for a term of three years. On the reorganization of the Imperial Department in 1890 Dr. Hultzsch's services were extended for a further period of three years, and his duties were shortly afterwards enlarged so as to embrace the publication of inscriptions from the whole of India, and under recent arrangements that officer now edits the Epigraphical Supplement to the Indian Antiquary. *Post of Epigraphist.*

142. Other steps taken by Government during the last five years for the encouragement of archæological research have been the purchase in 1892 for a sum of R6,000 of a valuable collection of Gupta Coins for *Miscellaneous.*

the Indian Museum from Mr. Rivett-Carnac : the publication, at the expense of the Bengal Government, by Dr. Hoernle, of the Sanskrit Manuscript, discovered by Lieutenant Bower in Mingai : the issue in a “ Technical Art Series ” of replicas of the best specimens of antique carving and ornamentation : the collection at the Indian Museum of all negatives of photographs representing objects of archæological interest and the commencement of a complete catalogue of them

The principal Circulars and Despatches bearing on the subject of this chapter are :—

Circular No. 24—4-2 dated 28th March 1889.

Despatch No. 95, dated 21st December 1892, to the Secretary of State

CHAPTER XV.

MINERALS AND GEOLOGICAL SURVEY

143 Of the economic resources of the country to which allusion *The Geological Survey Department* was made in Chapter XIII, the most important in many respects are the minerals. For the investigation of these the Government has already a trained machinery to hand in the shape of a Geological Survey Department. The chief measure taken under Lord Lansdowne in the administration of the Department has been to direct its energies into a more practical channel. Hitherto the Geological Survey had been on a purely scientific basis. Its researches were fast leading it into distant regions. The new policy commenced by Lord Dufferin has been definitely laid down by Lord Lansdowne's Government in the rules for the recruitment of the service which were issued in March 1893. Although, in order to preserve continuity in scientific enquiry, two-thirds of the executive officers of the Department will be retained for scientific work, the remainder, including two specialists, who may be engaged for limited periods, will be made available for practical investigations.

144 The extent to which the Geological Department has promoted *Practical Investigation* practical investigation during the last five years has been considerable. The coal resources of the country have been specially investigated by officers of the Geological Department at Eeb and Mohpani in the Central Provinces, at Kalimpong and Daltonganj in Bengal, in Hazara and the Salt Range in the Punjab, in Baluchistan, in the Khasia, Jaintia, and Garo Hills in Assam, and at Mergui and Ohindwin in Burma; improvements in working have been suggested, the outturn of new fields has been estimated, the character of the seams has been discovered, and in more than one case the reports of the Geological Officers have led to useful action on the part of Government or private capitalists. Similarly, borings have been made for petroleum in various parts of the Baluchistan Agency, and, though these have not met with marked success, it is expected that oil will be found in repaying quantities at Sukkur, where the Department is organising a final experiment: the oil of the Shirani Hills was also examined and found good in quality, though deficient in quantity; while at Yenangyaung in Upper Burma the Department was most useful in advising as to the arrangements for the demarcation and lease of the valuable wells there situated. Special enquiries have also been conducted in Madras into the iron ores of the Salem and Karnul districts, the corundum of Salem, the steatite of Karnul, and the gold of Anantapur, Bellary, and Cuddapah. The copper ores of Sikkim and the tin resources of Tenasserim have also been carefully examined by the Department, and general enquiries have been set on foot under Geological Officers as to the mineral resources of the Rewa State.

145. Concurrently with the investigations of the State Department, *Concessions.* there has been a marked development of enterprize on the part of the public at large. Of the concessions granted by Government in the last few years, the most important are those in Manbhum to the Bengal Iron

and Steel Company (1890); in Chanda Cherla (Central Provinces) and Bhadrachalam (Madras) to the Godavery Coal Company; in Upper Chindwin (Upper Burma) to the Burma Coal Syndicate (1891) and in Shwebo (Upper Burma) to the Burma Coal Company (1892); in Yenangyaung and Minbu (Upper Burma) to the Burma Oil Company and several separate syndicates (1892); in Lakhimpur (Assam) to the Assam Oil Syndicate (1892); and in Mergui (Tenasserim) to Captain Menzell for tin (1893). A concession was also made by the Secretary of State in 1889 to the Burma Ruby Mines Company, under which they were permitted to mine for rubies over an extensive area in Upper Burma, on payment of an annual rent of four lakhs of rupees: the returns have not, however, met expectation, and the payment of rent has now been for some time in arrears.

*The rules for the
grant of licenses*

146. The increasing number of applications for leave to explore, prospect, or mine having led to the submission of an inconvenient number of references to the Imperial Government and to the Secretary of State—a procedure which involved much unnecessary and vexatious delay to the applicants themselves—it was thought expedient that general rules should be laid down under which the majority of cases could be disposed of by Local Governments. Draft rules were issued with this object in March 1891, and a revised draft was, in June 1893, submitted for the approval of the Secretary of State. The object of the rules is threefold, *viz.*, (1) to delegate to Local Governments the power to grant licenses and leases, (2) to fix within certain limits the conditions of the grants so far as regards the area to which each grant applies, and the rates of royalty and dead-rent demandable, and (3) to maintain such supervision as may prevent purely speculative transfers of grants from the hands of the lessees to those of a public company. This last consideration has been introduced largely on account of the unfortunate gold-mining speculations of 1890-91, and is considered necessary to protect the development of Indian resources from the scandals which have accompanied the exploitation of mining schemes in other countries as well as in India.

Revised rules

147. The Secretary of State has simultaneously prepared rules indicating under what restrictions the Government of India is itself empowered to grant concessions without reference to the India Office, and these rules as finally revised, after correspondence with Lord Lansdowne's Government, were received with a despatch No. 46, dated 12th October 1893.

Mining legislation

148. No greater evidence perhaps can be brought forward of the strides with which Indian mining industry is advancing than the jealous interest which it has excited in England. As early as 1890 the Secretary of State consulted this Government as to the necessity for legislation in India for the purpose of providing due inspection of mines and regulating the employment of women and children therein. Lord Cross, in 1891, further suggested the complete prohibition of the employment of women and children in underground mining and the prohibition of the employment of children under twelve in mining of any kind. After full consideration the Government of India, in 1892, replied that in view of the facts that gang-labour in this country

involved families working together, that the mining operations were conducted as a rule above ground, and that accidents were extremely few there was no immediate call for legislation. They recommended, however, the appointment of an Inspector of Mines, and an Inspector appointed by Her Majesty's Secretary of State has recently arrived in India. It is hoped that under his advice such steps may be taken as may be necessary to prevent the degradation of the mining operatives and to preclude, as far as possible, the occurrence of accidents.

149. Meanwhile the progress of scientific exploration has not been arrested during the five years under review. The Central Himalayan survey proceeded and was made the subject of a report by Mr. Griesbach, one of the officers of the Geological Department. The interest aroused in Austria by this work in its bearings on the comparative study of the Himalayan and Alpine trias culminated in a proposal from the Vienna Academy of Sciences to depute Dr. Diener under a contribution from the Boue Fund to collect, with the assistance of the Survey, an illustrative series of fossils. The Government of Lord Lansdowne accorded a ready and liberal co-operation, and a Central Himalayan Expedition was organised by the Survey, the collections resulting from which were sent to Vienna, where they are being studied and described by eminent palæontologists for publication in the *Palæontologia Indica*. On the North-West Frontier and in Afghanistan, the opportunity was taken of the Miranzai and Black Mountain Expeditions, and of Mr. Griesbach's deputation with the Amir in 1888-89, to extend the knowledge of the geology and geography of those regions. In Baluchistan, where the geology was only known by traverses along protected routes, a more detailed sequence of operations has been instituted over broader areas of the prevailing cretaceo-tertiary rocks of Mari and Sind-Pishin, and again in the Shirani hills flanking the Sulaiman range; where passage beds between the cretaceous and eocene, similar to those already observed in peninsular India, have been met with. Renewed investigation in connection with the Imperial Institute, on the iron and corundum resources of Salem and Coimbatore in Madras, has opened up a wide and even economically promising field of petrological research among the vast tract of crystalline rocks, the few specimens from which already stored in museum collections at home had been the basis of the very first detailed microscopical work on the crystalline rocks of Ceylon and Salem by a distinguished French petrologist, M. Al. Lacroix. In Burma, some progress has been made with the proper geological survey of the country towards the northern and eastern frontiers. On the eastern side of the country the extension northwards of the palæozoic belt of formations, previously known through the old work of the Survey in Lower Burma, is indicated by the occurrence of lower palæozoics to the east of Mandalay and their presumed representatives north of Bhamo. Corroborative evidence of the carboniferous age of the strange cavernous limestones of Tenasserim and Moulmein has also been secured in a fair collection of characteristic fossils from the great Tenasserim river valley to the east of Mergui. An important correction was made in the geology of the Arracan Yoma, disproving the assumed occurrence of a triassic belt in that range.

*Progress of
scientific work.*

*Geological publica-
tions*

150, The periodical publications of the Department are (1) the Records, which carry on the history of current research, (2) the Memoirs, a series of monographs to which have been added during the last five years descriptions of "The Geology of the Central Himalaya," "The Physical Geology of the Sub-Himalaya of Garhwal and Kumaon," and "The Geology of Southern Malabar," as well as an Index by Mr. W. Theobald of the first 20 volumes of the series, (3) the *Palæontologia Indica*, a quarto publication giving plates and descriptions of the organic remains discovered from time to time: of this also a full index has been recently prepared by Mr. Theobald, and three new Fasciculi have issued, viz., Parts I and II, Volume IV, of Waagen's "Salt Range Fossils," and an account by W. T. Gregory of the Echinoidea of Cutch.

*Further publica-
tions*

151 During the five years under review a new edition has also been issued of the Manual of the Geology of India, originally compiled by Messrs. Medlicott and Blanford; a large geological map has been made on a scale of 32 miles to the inch, as well as a smaller map indicating coal areas; and a handbook on Iron and contributions for similar handbooks on Mica and Steatite have been prepared for the Imperial Institute.

The principal Despatches, Resolutions, etc., bearing on the subject of this chapter are:—

Resolution No. 3-74, dated 8th March 1893.

Despatch No. 11, dated 10th February 1892, to the Secretary of State.

„	„	63, dated 4th August 1892, from the	„	„
„	„	67, dated 23rd „ 1892, to the	„	„
„	„	35, dated 13th June 1893, „	„	„
„	„	45, dated 9th May 1889, from the	„	„
„	„	27, dated 17th „ 1893, to the	„	„
„	„	59, dated 3rd July 1890, from the	„	„

Circular No. 1124—25-2, dated 29th May 1891.

Despatch No. 81, dated 5th October 1892, to the Secretary of State.

„	„	6, dated 19th January 1893, from the	„	„
„	„	46, dated 12th October „ „ „ „	„	„

CHAPTER XVI.

METEOROLOGY.

152. In 1874 the investigation of the Meteorology of India was made the duty of an Imperial Department, under the Directorship of the late Mr. H. F. Blanford. Its researches and publications have now a recognized place in the scientific world, and its practical value for administrative purposes was fully appreciated by the Famine Commissioners of 1880. *Organization and work of the Department.*

153. Most of the reporting stations of the Department are spread over India and Burma, but some of them are located beyond the frontiers and along the shores of the Persian Gulf, Arabian Sea, and Bay of Bengal. They are divided into four classes according to the character of the observations recorded, and controlled and supervised under the general direction of the Meteorological Reporter to the Government of India by provincial officers, usually of the Medical or Educational Department, who, in the case of the larger provinces, receive an allowance for the extra duty. Besides the regular observatories there are over 2,000 stations maintained by Local Governments at which rainfall is recorded; these are generally under officers of the Land Revenue establishments. Information regarding the character and extent of snowfall in the Himalayas is also collected from officials and others resident in that region, while the meteorology of the Indian seas is investigated with the assistance of the observations recorded by the commanders of vessels by which they are regularly traversed. *Reporting stations.*

154. The Imperial Department publishes a daily weather report illustrated by a chart, also weekly and monthly discussions of current observations. Similar reports are published by the provincial offices for the local areas under them, and the daily chart, which was formerly confined to Bombay and Calcutta, has in 1893 been introduced also in Madras. Of late years the Imperial Meteorological Office has also attempted an annual forecast of the character of the south-west or summer monsoon, the publication of which is always looked for by the public with considerable interest. The more scientific results of meteorological investigations are published in Memoirs or Monographs of which the most important is a handbook of the cyclonic storms of the Bay of Bengal recently published for the use of seamen. *Daily Weather Report.*

155. Not the least valuable section of the practical work of the Department is its system of giving warnings of the approach and progress of storms to the principal Indian ports. This service is performed for the Bay of Bengal by the Meteorological Reporter to the Government of Bengal, and for the ports on the West Coast by the Central Office. Flood warnings are also given to officers of the Public Works Department in charge of irrigation works, and weather warnings to military expeditions in the field. *Storm and flood warning.*

156. During the past five years the organization of the Department has been carefully perfected by the present Reporter, who succeeded Mr. Blanford in 1887, and the economy and efficiency with which its administration is conducted was acknowledged by the Finance Commission of 1889. Within this period the number of observatories has *Progress of the past five years.*

increased from 165 to 197 ; a common hour has been prescribed for the taking of observations ; the remuneration of the subordinate observing staff revised and made to depend partly on results, and an extensive and strict system of inspection instituted. The record of rainfall at provincial rain-guage stations has been systematized ; the supply of information regarding Himalayan snowfall made more complete ; the system of storm and flood warnings developed and an impetus given to the study of marine meteorology by the publication of daily charts and reports of the weather throughout the Indian sea areas. Various other reforms have also been introduced with a view to extend and improve the accuracy of observations, to utilize to the utmost the grants assigned from public funds for the maintenance of the Department, and to increase its practical usefulness.

Solar physics

157. In addition to its purely meteorological work, the Department carries out actinometric observations, and under a reorganization of the Madras Astronomical Observatory, recently sanctioned by the Secretary of State, it will in future be in administrative control of that institution, as well as of a Solar Physics Observatory which is to be established in the Palni Hills of the Southern Presidency and where all classes of Astronomical and Solar observations now taken in various parts of India will eventually be concentrated.

The principal Despatches bearing on the subject of this chapter are :—

Despatch No. 63, dated 20th August 1891, from the Secretary of State.

„	„	37, dated 20th June 1893,	to	„	„	„
„	„	117, dated 31st August 1893, from		„	„	„

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CHAPTER XVII.

FOREST CONSERVANCY.

158. Previous to the introduction of British rule the forests were considered of little or no account. The cases in which they were protected from injury were few, and the object generally was the preservation of game or of sacred groves. Over the great mass of the country every one used the forest for his own personal requirements. The woods were ravaged by fire still more than by the axe. Pastoral tribes, with vast herds of cattle, roamed at will, destroying the tree-growth wherever they went, and no thought was given to the future requirements of the country in forest-produce. The advent of more settled government under the British did not check the prevailing destruction, but, on the contrary, served considerably to increase it. Immense quantities of timber were required for public works, while the opening out of roads and railways, the growth of public security and general wealth, and the consequent spread of cultivation, all tended to diminish the area of the forests and increase the intensity of the demands made on them. Local requirements were overlooked. Gradually, however, the degree in which interests of the local communities were concerned in forest maintenance and good management was recognized. Sporadic efforts, made from time to time, proved ineffectual, and it became at length apparent that a special organization was required to cope with a question of such magnitude and far-reaching results. For this purpose the Forest Department was started. As an Imperial organization it may be assumed to have commenced its work in 1865, when the first Indian Forest Act was passed. Since then the Department has steadily extended its sphere of work, and developed in a conservative manner the forest wealth committed to its charge, the broad policy being to place all kinds of forest-produce within easy reach of the people, and to maintain in perpetuity, so far as it is possible to do so, an area of forest in each locality sufficient for the present and prospective requirements of the country and especially of the agricultural classes.

*Origin of Forest
Conservancy*

159. Lord Lansdowne's Viceroyalty has not seen the acquisition of vast forests such as resulted from the annexation of Upper Burma, but his term of office has been coincident with a marked and steady increase in the constitution of permanently-settled forest estates, and it is in this direction that the progress of forest administration, under existing circumstances, can best be gauged. During the past five years, also, the necessity of recording the rights of the State, as well as those of the people, in or over forest-produce, on a more strictly legal basis than had previously in many instances been done, has become apparent, while experience has shown that the constitution of forests on any other basis, except as a preliminary to their speedy settlement as permanent State reserves, is usually open to grave objection. The forest-policy of Lord Lansdowne's Government has been broadly to determine what area of forest or waste land in each district or locality is necessary to meet in perpetuity the requirements of the

Recent developments.

people in timber, fodder, or other produce, and to provide as soon as possible for the strictly legal settlement and proper demarcation of this area as reserved forest.

*Progress made in
the settlement and
demarcation of
forests*

160. The total area of forest at the close of 1888 was 101,000 square miles, and during the past five years this area has been increased by 26,000 square miles or more than six times the area of the State forests in France. Of the total area of 127,000 square miles under administration at the commencement of 1894, 67,000 square miles comprised permanently settled properties known as reserved forests, over which rights have been settled and recorded. The remaining 60,000 square miles under Government management represent forests the proprietary and other rights in which have still to be defined in accordance with the forest law.

Forest legislation

161. Experience having indicated certain deficiencies in the Indian and Burma Forest Acts, they were amended in 1890, mainly in order to provide for the exercise by the State of a greater degree of control over all forest-produce wheresoever obtained, and to regulate the practices of shifting cultivation and the compounding of forest offences. At the same time the Upper Burma Forest Regulation was modified, as was also in the following year the Berar Forest Law. Of other legislation, the most important measure was the passing, in 1891, of a Forest Regulation for Assam, where the Indian Forest Act had previously been in force. Special forest laws were also enacted for Baluchistan, Ajmere-Merwara, and the district of Hazara in the Punjab. The period 1890 to 1893 was, therefore, one of exceptional activity, eight legislative measures having been adopted during these four years.

Forest organization.

162 The progress made in improving the organization of the State forests, though necessarily somewhat slow, has not been unsatisfactory. In a country like India, containing vast forests where sylvicultural management is a modern institution, the development of which is intimately connected with the customs and economy of the people, the first and by far the most important step towards the realization of a scientific scheme of management is the survey and legal settlement of those areas which it is intended to maintain permanently as forest. As mentioned previously, the advance made in the constitution of State reserves under the provisions of the law has been exceptionally great during the last five years, while the survey of the forests has also actively proceeded. Parties of the Imperial Survey Department have been engaged in mapping the forests in Madras, Burma, the Punjab, and the Central and Lower Provinces of Bengal. The Forest Survey Branch has surveyed, cheaply and efficiently, in more special connection with the preparation of working-plans, large areas in the Punjab, Oudh, Berar, the Central Provinces, Assam, and Burma. Under a system recently introduced, both the nature of the soil and of the forest growing upon it are recorded on the maps when this is desired, and the information thus afforded will, it is anticipated, prove a valuable aid in the organization of forest-working. The preparation of regular working-plans has been actively proceeded with in some provinces, such as Lower Burma and Bengal. In others progress has been delayed, either through an insufficiency of officers or by reason of the extra work involved in forest

demarcation and settlement. But the importance of maintaining and increasing the outturn of forest-produce from the more valuable areas and of providing in a methodical manner for the satisfaction of the rights of the people and the requirements of the agricultural community, is being yearly better understood.

163. During the five years ending with 1893, a very large increase occurred in the number of breaches of the forest rules brought to light and in the number of punishments awarded. This increase is the natural result of the great extension in the area of forest controlled by Government and brought under the operation of the forest laws, and is also accounted for by closer supervision and greater vigilance on the part of the protective staff. Three-fourths of the offences detected are of a sufficiently trivial nature to permit of their being compounded, and, as regards offences prosecuted before the Courts, the high proportion of convictions obtained previous to 1889 has been since increased. *Protection and improvement*

164. It is, however, by the institution of special measures for the prevention or suppression of fire that the future of the Indian forests must in the main be safeguarded. Expenditure under this head, successfully directed towards insurance, is immensely profitable. During Lord Lansdowne's term of office a notable advance has been made, the areas over which protection was extended having increased from about 22,000 to 30,000 square miles, at an annual cost of $2\frac{1}{2}$ lakhs only, or $1\frac{1}{2}$ per cent. on the gross forest revenue realised. *Protection against fires*

165. Although the reproduction of tree-growth and the extension of forests by artificial means can have no very material effect in improving the vast areas managed by the State, yet valuable experience is yearly acquired in this direction, and in Burma teak-planting will eventually prove an exceedingly profitable investment. Expenditure, however, in the direction of opening up the forests by lines of communication and export is usually more immediately profitable than money invested in other direct works of improvement; because in India the cost of transporting forest-produce is high and generally represents the greater part of the price paid by the consumer. During Lord Lansdowne's Viceroyalty this subject has received special consideration in various localities, such as Berar and the North-Western Provinces, where large sums have been profitably invested in constructing forest roads. Over all India the total expenditure under this head, which amounts to only about 2 per cent. on the gross annual revenue, might advantageously be increased. *Expenditure.*

166. The quantity of forest-produce annually yielded by the forests has largely increased during the five years to which this chapter refers. During the financial year 1891-92, 167 million cubic feet of timber and fuel, and minor products (including bamboos) to the value of $4\frac{1}{2}$ million rupees, were removed from the forests. The quantity of timber and fuel so extracted is equivalent to 1,500 cubic feet per square mile of forest under Government management. The enormous supplies of produce at present utilized represent, however, but a fraction of what may be expected hereafter, when, by the opening out of the remoter forests by railways and roads, and by more complete systems of *Field and Working*

working, it will become possible to more fully reap the actual annual production. In connection with the more extended utilization of the forests both in India and abroad, the issue of a series of cheap handbooks, edited by the Reporter on Economic Products, containing useful information on various raw forest products, has recently been started, and opportunities for enquiry and research in the same direction are also afforded at the Imperial Institute in London.

Financial

167. The average annual receipts, during Lord Lansdowne's tenure of office, have been 157 lakhs, as against 116 and 92 lakhs during the respective Viceroyalties of Lords Dufferin and Ripon. And it must be remembered that these figures take no account of the enormous value of the produce given away free to right-holders and others. The exceptional expansion in the forest-revenues during the past five years is no doubt partly due to the working of the newly acquired teak-bearing tracts in Upper Burma, but it must, in the main, be ascribed to a perfectly normal development of forest exploitation in almost every province. On the other hand, the income recorded as forest-revenue must be discounted by the very material amount of revenue which would have been in any case realized from the rental of forest lands for grazing and agricultural purposes.

The Forest Staff

168. An important measure of forest administration during Lord Lansdowne's Viceroyalty has been the reorganization of the superior controlling staff of the Forest Department, which had been under consideration since 1886. The scheme followed the recommendations of the Public Service Commission in the constitution of cadres of Upper and Lower Control, corresponding to the division of the services into Imperial and Provincial. Under the reorganization various amendments in the superior staff have been effected, and provision has been made for a regular cadre on which officers of Lower Control, recruited in India, may rise to be Extra-Deputy Conservators on a graded scale of pay equivalent to two-thirds of the salaries of Deputy Conservators of Upper Control. Excluding temporary establishments, the Forest Service in the three Presidencies now consists of 18 Conservators, 174 Deputy and Assistant Conservators, 86 Extra-Assistants, 281 Rangers, and 8,335 Foresters and Guards, together with a clerical staff, costing in all Rs33,33,600 per annum. Proposals for reorganizing the executive and protective establishments, involving a considerable increase in the strength of these staffs, which are at present much undermanned, were carefully matured and submitted by Lord Lansdowne's Government to the Secretary of State, who, though not dissenting from them, has, on financial considerations, advised their postponement.

Forest instruction

169. The course of training in the Forest Branch of Cooper's Hill College has been extended from two to three years in order to admit of the practical training of the students on the Continent. Within the last five years, also, the scope of work and constitution of the Imperial Forest School at Dehra Dun, which is resorted to from the British provinces as well as from Native States and Ceylon, has been extended and improved, the curriculum of studies and examinations being controlled by an independent visiting body.

Lastly, during Lord Lansdowne's Viceroyalty an arrangement has been introduced by which Indian Forest Officers are afforded facilities, when on leave, for studying the progress made in forest administration in Europe.

The principal Circulars, etc., bearing on the subject of this chapter are :—

- { Circular No 17—105, dated 15th July 1891
- ,, ,, 18 F., dated 29th July 1891.
- , ,, 22 F., dated 25th July 1892

CHAPTER XVIII.

FISHERIES

*Legislation for
protection of
fresh-water fishes*

170. The subject of legislating for the protection of fresh-water fishes was opened with an enquiry made so long ago as 1869 by Dr. F. Day, of the Madras Medical Service, who had been placed on special duty for that purpose. This was followed by a Resolution issued in October 1871 on Dr. Day's report for the North-Western Provinces, in which he recommended a Fisheries Act.

Action taken

171. Briefly, the action taken by the several provinces was as follows. In 1875 a Fisheries Act was passed for Burma. In 1880, the Punjab Government submitted a draft Act and Rules. In 1881, the Bombay Government submitted a Bill for the preservation of game and fish. In 1883, the Government of Madras submitted a draft Fishery Bill. In 1889, the North-Western Provinces Government submitted recommendations made by the Commissioner of Kumaon for preserving fish in the North-Western Himalayas, and the same year a short Act was passed in Bengal for the protection of private fisheries. Meanwhile, the Government of India issued a Circular placing the information obtained up to date before Local Governments, with a view to the discussion of the subject at a Conference held at Delhi in 1888.

Bill of 1893

172. The proceedings of the Conference were circulated and the opinions of Local Governments obtained. The Bengal Act of 1889, for the prevention of poaching in private waters, was followed in 1892 by an Act passed by the Madras Government for the protection of game and fish in the Nilgiris. Finally in October 1893 a Bill was introduced into the Imperial Legislative Council for the purpose of empowering Local Governments to undertake measures for protecting fish in both public and private waters. The Secretary of State has in a Despatch received just before Lord Lansdowne's departure intimated that he will not communicate his opinion on the Bill until he has had the opinions of Local Governments before him.

*Sea water fishing
pearl oysters*

173. The right of Government to control sea-water fishing has been the subject of legislation in Burma only, and that right has, recently, in the case of the Mergui Pearl Fisheries, been ruled by the Indian Law Officers to extend only to the limit of three miles from the shore of the mainland or an island, except in bays, gulfs, and estuaries *inter fauces terræ*. The question has, however, been referred to the English Law Officers for further opinion. Meantime, the pearl fisheries in Mergui and the Andamans have begun to attract attention from capitalists, and the services of an expert have been obtained from the Government of Queensland for the examination of the oyster beds in Mergui, with a view to the initiation of proper arrangements for their future development.

CHAPTER XIX.

INVENTIONS AND DESIGNS

174. There is not much to be said in this chapter except that the present Patent Act, introduced in 1883, has worked better than that previously in force; that the number of patents annually dealt with has risen from about 450 to 650 in five years; that the income now amounts to nearly R16,000; that there is every prospect of a rapid increase; that just before Lord Lansdowne's departure the executive control of the Office was, for the convenience of the public, transferred from the Survey Department to the Imperial Librarian whose office is under the same roof as the Patents Museum; and, finally, that a proposal made by the Associated Chambers of Commerce in England to provide by registration in London for protection of Inventions in India and in British Colonies was, with the concurrence of the chief mercantile bodies of this country, disapproved, mainly on the ground that the English Patents Office would not be competent to examine questions involving knowledge of economic and agricultural methods pertaining to this country.

The following Despatch bears on the subject of this chapter:—

No. 54, dated 21st July 1891, to the Secretary of State.

CHAPTER XX.

LEGISLATIVE MEASURES.

175. The following Acts and Regulations dealing with matters within the cognizance of the Department of Revenue and Agriculture were passed by the Governor General in Council under 24 and 25 Vict., C. 67, and 33 Vict., C. 3, respectively, during the years 1889 to 1893 :—

1889.

1. *Act IX of 1889*.—An Act to authorise the imposition of a Patwari rate in the North-Western Provinces and Oudh, and make certain provisions respecting Kanungos and Patwaris in those provinces.

2. *Act XVI of 1889*.—An Act to amend the Central Provinces Land Revenue Act, 1881, and the Central Provinces Local Self-Government Act, 1883.

3. *Act XVII of 1889*.—An Act to amend the Central Provinces Tenancy Act, 1883.

4. *Regulation I of 1889*.—Regulation to declare and amend the law relating to the collection of revenue in Coorg.

5. *Regulation II of 1889*.—Regulation to amend the Assam Land and Revenue Regulation, 1886.

6. *Regulation III of 1889*.—Upper Burma Land and Revenue Regulation.

1890.

7. *Act I of 1890*.—An Act to make better provision for recovering certain public demands.

8. *Act V of 1890*.—An Act to amend the Indian Forest Act, 1878, and the Burma Forest Act, 1881.

9. *Act XVIII of 1890*.—An Act to amend the Indian Emigration Act, XXI of 1883.

10. *Regulation V of 1890*.—A regulation to declare the law relating to Forests in British Baluchistan and amend the British Baluchistan Laws and Civil Justice Regulations, 1890.

11. *Regulation VIII of 1890*.—Upper Burma Forest Regulation (amending Upper Burma Forest Regulation, 1887).

12. Baluchistan Agency Forest Law, 1890 (published by Foreign Department).

1891.

13. *Act XXII of 1891*.—An Act to extend the Inland Emigration Act, 1882.

14. *Regulation III of 1891*.—A Regulation to provide for the commutation of the rights, if any, corresponding to the *Jhum*, *tippera*, *gurkati*, and *pani-sikka* assets of certain permanently settled estates in the district of Sylhet.

15. *Regulation V of 1891*.—A Regulation to amend the Upper Burma Ruby Regulation, 1887.

16. *Regulation VII of 1891*.—A Regulation to amend the law relating to forests, forest produce, and the duty leviable on timber in Assam.

17. Berar Forest Law, 1886, Amendment Law, 1891 (published by the Foreign Department).

1892.

18. *Act IV of 1892*.—An Act to amend the Bengal Court of Wards Act, 1879.

19. *Act X of 1892*.—An Act to provide for the levy of a rate on private estates under the management of the Government to meet the cost of supervision and management.

20. *Regulation I of 1892*.—A Regulation for affording the aid of Government in the preservation of woodlands and grazing grounds, not being State forests, in Ajmir and Merwara.

1893.

21. *Act III of 1893*.—An Act to provide for the grant of Special Tenancies in certain Government lands in the Punjab.

22. *Act VII of 1893*.—An Act to amend the Inland Emigration Act I of 1882.

23. *Regulation*.—Coorg Village Cess Regulation.

24. *Regulation VI of 1893*.—A Regulation to provide for the preservation and management of Forests in the District of Hazara.

176. The following draft legislative measures have also been under consideration, but have not yet been passed into law :—

1. A Bill to amend the Land Acquisition Act X of 1870.

2. A Bill for the protection of fishes in rivers and other inland waters.

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177. The undermentioned Enactments and Bills of Local Legislative Councils have received His Excellency's approval in the Revenue and Agricultural Department for the period under review :—

1. *Act VI (Bo. C.) of 1898*.—An Act to provide for the Revenue Administration of Estates held by certain superior landholders in the districts of Ahmedabad, Kaira, Broach, and the Panch Mahals, and to limit the further operation of Bombay Act VI of 1862.

2. *Act I (B. C.) of 1889*.—An Act to provide for the sanitation of emigrants during their passage through Bengal to the labour districts in Assam.

3. *Act III (Mad. C.) of 1890*.—An Act to amend the Madras Local Boards Act, 1884, and the Madras Rent Recovery Act, 1865.

4. *Act III (Bo. C.) of 1890*.—An Act to amend the Matadars Act, VI of 1887.

5. *Act I (B. C.) of 1891*.—An Act to amend the Public Demands Recovery Act, 1880.

6. *Act IV (Mad. C.) of 1893*.—An Act for the levy of a cess towards the remuneration of village officers and for other purposes connected with the discharge of their duties.

7. Madras Proprietary Estates Village Service Bill.

8. Bill to provide for the conduct of business by the Board of Revenue, Madras.

9. Bill for facilitating enquiries into matters connected with the administration of the Revenue and into the conduct of Public Servants in Madras.

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